



Infor VISUAL EnterpriseTM

IMPLEMENTATION TOOLKIT 2.0
Implementation Essentials

Implementation Essentials for VISUAL Manufacturing™

For Release 6.2

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PETER D. ERDMAN

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Chapter 1 - Purpose and Scope

Purpose

The purpose of *Implementation Essentials* is to guide you through the use of all the other implementation tools you have received. Consider this the master document to explain how to use the other implementation tools, which order they will be used, and at what stage of your VISUAL Manufacturing implementation you will be referring to them. In short, this guide will be your key tool in making your implementation as efficient as possible.

Scope

This document will confine its scope to the Manufacturing, Finance, Payroll and Human Resources areas of VISUAL. While we will supply some pointers on what to do after you go live, the primary focus of the Implementation Toolkit is to guide you through your implementation related activities from the day of purchase to the day you go live. However, once going live, you should have a complete set of Standard Operating Procedures in place and the tools to keep them alive for the entire life of VISUAL Manufacturing.

Related Documents

Implementation Workbook

Information System Documentation

Standard Operating Procedure

Standard Reports (for VISUAL Manufacturing)

Implementation Roadmap

Toolkit CD-ROM

Style Guide

Problem Report (Pad)

Check Sheet (Pad)



Chapter 2 - Introduction

Background

Corporate

Richard T. “Dick” Lilly, LSA President and CEO formed Lilly Software Associates (LSA) in 1992. Dick Lilly is a veteran solutions provider for the manufacturing and financial software industries. A long-standing advocate of the use of technology to serve the business needs of manufacturers, Dick Lilly formed Lilly Software Associates with the sole purpose of bringing to market an integrated software solution that would provide all of the mission-critical functionality required by manufacturers competing in today’s global economy. Mr. Lilly’s highly successful track record includes founding both Software International and ProfitKey Corporation.

Lilly Corporate offices are in Hampton, New Hampshire, USA, and in more than thirty countries on five continents through the Lilly Software Associate exclusive distributorship, including thirty sales/services offices in US, Canada, UK, Asia, South America, Europe, Australia, and South Africa.

Client Base

Currently there are over 1,700 VISUAL Manufacturing installations including customers such as Xerox, Digital Equipment Corporation, Microsoft, Lockheed-Loral, Ford, Rolls Royce, Penn United, Svedala, Hitachi, and Physician’s Mutual. All of the installations account for over 22,000 total users.

Typical customers are Tier One and Tier Two manufacturing suppliers, job shops, and custom manufacturers at sites with 1,000 employees or fewer.

VISUAL Manufacturing is used especially in the electronics, transportation, machine tools, and fabricated metals industries, where engineering change management, tight cost control, constraint-based scheduling and simulation, and customer delivery performance are critical functions.

At the same time, the affordability, functional depth, ease-of-use, and rapid implementation has enticed hundreds of less well-known manufacturers around the world to purchase Lilly Software products.

Product Development

Lilly Software is committed to securing its leadership position long-term through significant investment in development, currently at 25% of revenue. At present, eighteen software engineers and nine Quality Assurance engineers develop and support Lilly Software products. Lilly Software also spends more than \$5,000 per day on outside development with third parties.

In 1998, Lilly Software is recreating its portfolio of products. While the core products will remain similar, the Development Team is expanding the manufacturing control system into the supply chain with VISUAL Distribution, and into the small manufacturing arena with VISUAL Job Shop.

Inc. Magazine ranked Lilly Software as #102 of the nation's 500 fastest-growing companies and by Deloitte and Touche as the 27TH fastest-growing New England software company. Lilly Software was also listed as one of *Manufacturing Systems'* "Top 100 Software Companies" of 1998.

Products

VISUAL Manufacturing

VISUAL Manufacturing is a PC-based client/server manufacturing management solution for job shops and other make-to-order facilities.

Software is recommended for:

- ☐ Repetitive Manufacturers
- ☐ Custom or Job Shop
- ☐ Process Batch
- ☐ Mixed Mode
- ☐ Engineer to Order

VISUAL Manufacturing, the flagship product in the fully integrated Enterprise Resource Planning suite of applications, provides an integrated manufacturing solution for companies involved in engineer-to-order, make-to-order, assemble-to-order, make-to-stock, and mixed mode manufacturing. It provides all the functionality needed to manage and run an entire manufacturing operation.

VISUAL Manufacturing's unique fully integrated manufacturing execution system technology focuses on increased throughput for maximized profitability. Optional modules integrate seamlessly with VISUAL Manufacturing to provide enhanced, customized solutions for productivity and quality control, engineering and estimating, management, financials, human resources, and payroll. Total integration of functionality provides timely, accurate information to everyone in your organization. Starting from the design engineer, to the shop floor foreman, to the controller, and the payroll manager.

Standard Features

Engineering Definition capabilities allow you to create engineering plans or Bills of Material quickly and simply using a full color graphical interface and point-and-click technology.

Job Costing features allows you to calculate, track, and report your costs.

Quoting & Estimating features allow you to create customer quotations from existing work orders, part engineering masters, or other quotes.

Customer Order Entry features allow you to track orders instantly and access up-to-date information about customers.

Purchasing allows you to easily coordinate material purchases by providing online decision support that simplifies your record keeping. It allows you to directly issue a purchase order while viewing a Bill of Material and purchase materials directly to inventory or a job.

Scheduling tools provide state-of-the-art functionality including finite and infinite scheduling, forward and backward scheduling, and consideration of due dates, priorities, and resource and material availability. Full color graphical display and drag-and-drop editing capabilities make this a simple to use yet powerful tool.

Shop Floor Control is the result of the integration between all the features of VISUAL Manufacturing including costing, labor tracking and reporting, inventory transactions, and purchasing. It provides complete control of your production process allowing you to monitor productivity and control costs.

Inventory Control provides you with the information you need to control costs and eliminate shortages or overstocking. Parts are managed from purchase or manufacture through to the final assembly, warehousing, and shipping. Additionally, the physical inventory and cycle counting tools ensure accurate tracking of parts.

Centura Report Builder Report from Centura is a tool that allows you to customize VISUAL Manufacturing standard reports. Quest Report's intuitive interface and cut and paste Windows technology allows you to easily modify a report or include additional database fields from VISUAL Manufacturing.

VISUAL Messages provides Work Flow Message technology within VISUAL Manufacturing. Using VISUAL Messages, activities are proactively driven throughout the organization. Your predefined messages are automatically delivered to the appropriate personnel when a specified triggering event occurs in VISUAL Manufacturing.

Optional Features

Lilly Software Associates offers optional *Product Data Management* (PDM) modules to optimize your ability to efficiently design and engineer your product. The following modules help you achieve greater operating efficiency thereby reducing your costs while improving the overall quality of your product:

Enterprise Information System allows you to graph and analyze key factors and performance trends within your enterprise.

The *Master Product Configurator* module is a sophisticated engineering tool for manufacturers of complex, highly configurable products with numerous standard and available options.

The *Engineering Change Control* (ECN) module provides a control and tracking system for changes made to the standard Bill of Material and routings.

The two *Computer Aided Design* (CAD) modules, (DesignLink Integrator and DesignLink Locator), provide a dynamic communication path between engineering and manufacturing.

The *Dimensional Inventory Tracking* module is a tracking and control system that manages inventory and calculates costs by viewing material in terms of its dimensional components (For example, units of usage).

The *Statistical Sales Forecasting* module generates sales forecasts quickly and easily and allows you to graph the results.

The *Master Production Schedule* (MPS) module generates a production plan from your business plan.

The *Material Requirements Planning* (MRP) module provides comprehensive analysis of your material situation based on your production plan. It then suggests remedial measures when appropriate.

The *Part Traceability* module tracks parts through the entire manufacturing cycle and provides stringent controls and a comprehensive audit trail.

The *Bar Coding* (*Wedge/PC Bar Coding*) module is an automated system for recording and tracking labor using an input device.

The *Data Collection* (*Central Labor Bar Coding*) module is an automated system for recording and tracking labor from multiple remote locations.

The *Electronic Data Interchange* (EDI) module allows for the electronic transfer of manufacturing data.

VISUAL Financials

VISUAL Financials provides you with a total enterprise solution to your accounting needs. It consists of three modules: *General Ledger*, *Accounts Receivable*, and *Accounts Payable*, which are fully integrated with VISUAL Manufacturing and allow for the seamless transfer of information. This ensures that information is accurate and current and eliminates the need for repetitive entry of data.

VISUAL Manufacturing modules create transactions that post to VISUAL Financials with a click of the mouse. Moreover, you can transfer accounting information back into VISUAL Manufacturing to ensure your manufacturing costs are accurate. For more on VISUAL Manufacturing, read further in this section.

Each of the VISUAL Financials modules is a fully functional system within itself. Together they comprise a powerful tool for addressing the total accounting needs of your business. Multi-entity processing and multi-currency capabilities provide you with the technological edge you need to compete in the global marketplace.

The *Accounts Payable* system is designed to automatically keep track of everything purchased from vendors and provide you with control over company expenditures. Standard reports in Accounts Payable inform management when payment is due, to whom the payment is owed, and the cash requirements for paying all invoices due. Other critical reports are provided to give information about vendor history and uninvoiced receipts.

Accounts Payable automatically creates vouchers (based on POs), generates checks to the vendors, and updates the appropriate General Ledger accounts. You also have the ability to record manual checks so that they can be properly posted.

Recurring Accounts Payable vouchers can be easily set up and generated. This saves time and trouble for those payments that are due on a regular or recurring basis

Using Accounts Payable, you can:

- ☐ Automatically create vouchers through POs/receipts matching.
- ☐ Apply credit memos to open vendor invoices.
- ☐ Create recurring vouchers and specify the frequency.
- ☐ Specify multiple A/P accounts for an invoice.

- ☐ Automatically print vendor checks for invoices scheduled for payment.
- ☐ Review extensive A/P information available on standard A/P reports.
- ☐ Create journal entries for General Ledger as a result of A/P processing.
- ☐ Automatically update miscellaneous charges to a work order and job cost information in VISUAL Manufacturing from A/P invoices.

Accounts Receivable provides important cash flow information vital to the effective management of your business. It provides you with control over your receivables by allowing you to define credit terms and limits by customer and to specify your own invoicing and statement cycles.

The Accounts Receivable system provides you with information about your company's credit sales and cash receipts. This information includes what the customer has bought, how much they owe, when payment is due, and any payments past due. Accounts Receivable allows you to generate invoices, record payments and prepayments, issue credit memos, and produce management reports.

Using Accounts Receivable you can:

- ☐ Automatically generate A/R invoices from shipping activities in VISUAL Manufacturing.
- ☐ Specify multiple A/R accounts for an invoice.
- ☐ Report customer prepayment and have VISUAL automatically deduct the amount of the prepayment or credit from the invoice total.
- ☐ Automatically generate credit memos from returns in VISUAL Manufacturing.
- ☐ Create credit memos for price adjustments and then apply them to open invoices.
- ☐ Apply cash receipts to specific customer invoices and determine how overpayments and underpayments should be handled.
- ☐ Review extensive A/R information available on standard A/R reports such as Aged Receivables, Customer History, and Customer Statements.
- ☐ Create journal entries for General Ledger as a result of A/R processing.
- ☐ Share A/R customer payment and credit data with VISUAL Manufacturing.

The *General Ledger* is the repository of all financial information for your enterprise. It consolidates the financial information from Accounts Payable, Accounts Receivable, VISUAL Payroll, and VISUAL Manufacturing, and additionally allows you to record financial transactions directly within the ledger when necessary. This guarantees that the information you use to make your crucial business decisions is based on timely and accurate facts.

Ledger entries are created automatically in Accounts Payable, Accounts Receivable, VISUAL Payroll, and VISUAL Manufacturing as a result of normal processing activities such as invoicing, shipping, inventory control, billing, recording a customer payment, or producing payroll. You control the timing of posting these transactions to the General Ledger.

Using General Ledger you can:

- ☐ Define a Chart of Accounts that mirrors your enterprise structure.
- ☐ Select the G/L reporting method, either monthly, 4-4-5, 13 Period, or a user-defined value.
- ☐ Define multiple financial entities for consolidated reporting.
- ☐ Create recurring journals, reversal journals, and automatic allocations based on rules you specify.
- ☐ Post to multiple fiscal periods (including the future year) subject to definable controls.
- ☐ Review financial information by printing standard G/L reports, or use the G/L Report Writer to create customized reports.
- ☐ Post journals created in VISUAL Manufacturing and VISUAL Payroll to eliminate repetitive data entry and ensure data integrity.

VISUAL Human Resources

VISUAL Human Resources is a comprehensive data management and reporting tool. It maintains vital data about applicants and employees and provides numerous standardized reports. The flexibility of VISUAL Human Resources allows you to track as much or as little information as you require.

Because of its dynamic integration with VISUAL Payroll, data is shared between the two applications eliminating the need for repetitive data entry while ensuring consistency and accuracy.

Using VISUAL Human Resources, you can:

- ☐ Record and track job postings, applicant information, and interview notes and results.
- ☐ “Hire” an applicant to automatically create an employee record in VISUAL Payroll.
- ☐ Automatically track Time Accrual from VISUAL Payroll earnings data.
- ☐ Record and track employee performance, education, salary, attendance, seniority, and grievances.
- ☐ Use consignment tracking to monitor equipment loans.
- ☐ Report and track accidents and workers’ compensation claims.

VISUAL Payroll

VISUAL Payroll is a sophisticated Payroll processing and reporting system. It is fully integrated to other VISUAL applications including VISUAL Manufacturing, VISUAL Financials, and VISUAL Human Resources. Information can easily be transferred between these applications. This eliminates the need for repetitive data entry and ensures the integrity of your data.

VISUAL Payroll supports all federal and state taxes. It includes state-of-the-art functionality such as direct deposit, 401(k) plans, electronic tax payments using the EFTPS system, magnetic media filing for the federal copy of the W-2s, and sophisticated report sorting and timing features.

Using VISUAL Payroll, you can:

- ☐ Automatically record earnings and hours from VISUAL Manufacturing.
- ☐ Define earnings, deduction, tax-add to, and override codes with customized calculations.
- ☐ Direct deposit employee wages with an unlimited number of splits.

- ☐ Establish automatic wage garnishments with optional arrears handling.
- ☐ Define multiple 401(k) plans for the company, then establish automatic deductions for employees.
- ☐ Use EFTPS to transmit tax payments electronically.
- ☐ Use magnetic media filing for W2s.

Toolkit Components Overview

Listed below is a summary of the various components of the Implementation Toolkit and what they are used for. Later, in section three much more detail is provided on how to use each of these tools.

Roadmap

This is a large poster that summarizes the overall implementation process.

Implementation Essentials

Implementation Essentials (this book) is the main source of information on how to implement VISUAL Manufacturing and use the various Toolkit components.

Kickoff Presentation

A presentation to be used during the kickoff session with your implementation team members and even the company as a whole. (Microsoft PowerPoint format)

Implementation Workbook

The *Implementation Workbook* is designed to be a single source of information for each team member. The various forms are used to capture thought processes, meeting notes, and key decisions.

Work Plan

This is a detailed breakdown of all of the tasks required to implement VISUAL Manufacturing. Once customized, the Gantt chart is stored in the *Implementation Workbook* (Microsoft Project format.)

Standard Reports Book

This book contains samples of all the standard reports in VISUAL Manufacturing grouped by business function.

Standard Operating Procedure Documentation

Sample operating procedures are provided that can be customized for your company's specific needs. Once complete, the documentation is available both online and in printed format.

Systems Documentation

This binder documents all of the technical aspects of your system.

Documentation Style Guide

This document details the style in which all of the materials in this Toolkit were written. It may be desirable to customize this *Documentation Style Guide* to reflect the practices that you have already adopted at your organization.

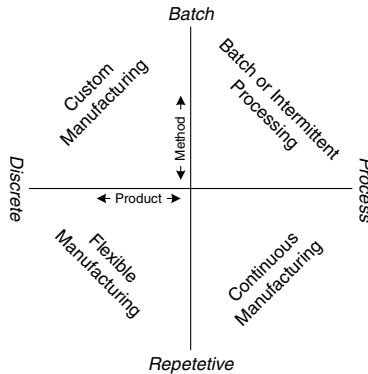
Problem Report - Note Pad

These are half-sheet padded forms that are used by users to report any problems that they may encounter throughout the life of VISUAL Manufacturing.

Check Sheet - Note Pad

These are half-sheet padded forms that are used by users to tabulate the best place to improve the overall system by determining where the best return can be achieved.

Types of Manufacturing



The above diagram attempts to divide the various types of manufacturing into four categories. Depending on which category your business falls into will affect how you should implement VISUAL. You may produce products that fit somewhere between the examples provided, or maybe you produce products in more than one category. It is necessary to carefully weigh the pros and cons between choosing one industry versus another.

Each icon represents a category. These four icons will guide you through the decision making process in configuring VISUAL. Each option dictates how you will set a variety of system settings in your VISUAL database.

Custom Manufacturing

Custom manufacturing systems are used to make specialized products. These products are designed for a specific customer. Only a few products were built to fill a need. Typically, the manufacturing cycle is an extended period of time. Spacecraft, ships, some furniture, and clothing for special needs are custom manufactured. Sometimes, many people will work on the same product.

Batch or Intermittent Processing

Intermittent manufacturing is widely used today for such products as wine, cookies, chemicals, and beer. In this type of manufacturing, the product parts travel in a lot or batch, which a specific identifier identifies. All of the items within the batch are considered identical, but the parts in one batch are not considered identical to the parts in another batch. Parts move from one operation to the next operation together in a batch.

Continuous Manufacturing

When many products are needed, continuous manufacture is generally used. Parts move down a line and each worker completes a specific operation very quickly. Completed parts flow constantly to form the finished product.

Flexible Manufacturing

Flexible manufacturing is a hybrid type of manufacturing that combines aspect of continuous and batch processing. This method allows companies to produce small lots like intermittent manufacturing with the ability to use actions similar to a continuous manufacturing environment. Thus, flexible manufacturing is seen as the way for the future. It produces low cost parts, as they are needed.

Company Size

Big Company

Big company characteristics:

- ☐ Multi-level management
- ☐ Multi divisions
- ☐ More than one simultaneous VISUAL implementation
- ☐ More written inter-communication
- ☐ Many people wearing individual hats
- ☐ More training issues
- ☐ Multiple shifts
- ☐ Security and uptime far more critical

Small Company

Small company characteristics:

- ☐ May be owner and only a few employees
- ☐ Most inter-communication is verbal
- ☐ Those performing implementation are the users
- ☐ Many hats worn by various people
- ☐ Single plant/one division
- ☐ Security is loosened and short down times have minimal consequence

Special Attention

Checklist

This attention indicates audit or diagnostic questions to consider during the implementation process.

Definitions

This attention indicates definitions from industry standards such as American Production and Inventory Control Society (APICS) and CAN/CSA-ISO 8402-94.

Toolkit Form

This attention indicates that a specific Implementation Toolkit form is to be used with the activity being described.



Chapter 3 - Implementation Tools

Toolkit Components

This section provides detailed information on each of the Toolkit components

Roadmap

The Roadmap is a color poster showing the “roadmap” to the implementation and a high-level project plan. This poster should be hung in the main implementation area for VISUAL Manufacturing and your dates added, as they are determined. This will become the company milestone / goal marker.

Implementation Essentials

Implementation Essentials is a practical handbook for implementing VISUAL Manufacturing. The primary objective of this handbook is to provide both novice and experienced implementation practitioners with a concise, user-friendly guide for understanding and implementing the requirements of the VISUAL Manufacturing system.

Kickoff Presentation

This presentation is designed to be used during the kickoff session of VISUAL Manufacturing. Typically, once the initial stages of project organization are complete, a meeting is held with all interested people to explain the project from a broad perspective.

This presentation contains insight into the challenge ahead for everyone involved with the implementation. Certain areas in the presentation, indicated by red type, need to be customized for your particular company.

Implementation Workbook

The Implementation Workbook is a series of tools, forms, and suggestions of customized implementation information that is tabbed in a logical sequence. The workbook is a single source for your implementation information. Each major team member gets one workbook (typically there are three core teams). All forms are to aid in the implementation process and should be used to capture thought processes, meeting notes, and key decisions. The workbook is divided into twelve sections (tabs).

Tab 1 - Objectives & Goals

The purpose of this section is to have defined, business oriented, project objectives that answer the question of why your company is implementing the VISUAL Manufacturing system. They must be real, concise objectives. A well stated objective should be simple and easy to remember. Goals are used to support each objective and must be measurable.

Objectives (IMP-T1-FORM110)

Goals (IMP-T1-FORM112)

Tab 2 - Project Overview

This section contains a project overview taken from the high-level tasks in the Gantt Chart. This is another management tool much like the “Road Map” that is a high-level project plan. The project overview allows a graphical view of all major task groups, start times, and the duration time scheduled with out the details of all 700 plus tasks.

Project Overview (IMP-T2-DOC210)

Tab 3 - Team Definitions & Contacts

The purpose for team definitions is to clearly show management leadership and involvement. It is important to recognize that implementing a new ERP system is a major corporate project. Team definitions provide representation for organizational lines, department cross-functions, and will create a champion for each of the objectives.

Team Definition (IMP-T3-FORM310)

Contact List (IMP-T3-FORM312)

Tab 4 - Team Meeting Notes

This section provides two important functions: recording the meeting events for follow up discussion and determining the actions to be taken. Also, this section is used to preserve the knowledge base generated by team meetings. Make it a habit to use written notes for each meeting. You may want to appoint a “scribe” to keep notes and distribute them after each meeting. Other worksheets included are Brainstorming, Force Field Analysis, and Cause & Effect Diagrams to focus team discussions. The contact form provides a single location for implementation contacts.

List all key personnel for the implementation here. This list will become part of your information system documentation after you go live.

Team Meeting Notes (IMP-T4-FORM410)

Brainstorming Worksheet (IMP-T4-FORM412)

Force Field Analysis (IMP-T4-FORM414)

Cause & Effect Diagram (IMP-T4-FORM416)

Brainstorming Worksheet Usage

The Brainstorming Worksheet is used to record all meeting ideas and thoughts for the purpose of preserving knowledge. It allows further discussion on any or all of the subjects that are raised during a team meeting. An example on ways to loose weight is presented below to illustrate the usage of this form.

VISUAL Manufacturing Implementation Workbook		Description: BRAINSTORMING WORKSHEET		Tab: 4
Document # IMP-T4-FORM412		Revision: 1		Dated: 1 JUN 2 2001
Page: 1 of 1		Document Owner (Title & Name): ACCOUNTING - DEB		

Purpose/Scope:
 This Brainstorming Worksheet is used to record all meeting ideas and thoughts for the purpose of preserving the meeting knowledge and to allow further discussion on any or all of the subjects that are raised during a team meeting.

Related Documents:
 IMP-T4-FORM410 Team Meeting Notes

Topic: DETERMINE COSTING METHOD TO BE USED. ACTUAL COSTING VS. STANDARD COSTING	Participants: DON, DEB, DAN
--	---------------------------------------

How is Inventory Effected:

- Raw
- Work In Progress
- Finished Goods

Can We Change Methods Later?

If We go Actual is there a way to still get Standard Values?

Do we do more Batch or Continuous Processing?

Effect on Small \$ Parts?

Effect on Big \$\$\$ Parts?

Effects on Demo Inventory?

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Implementation Workbook

Raised topic

Current participants

A free-form listing ALL of the ideas raised by ALL of the participants

Force Field Analysis Worksheet Usage

The Force Field Analysis Worksheet is used to help provide a clear solution to decisions to be made by recording driving and restraining forces, or pros and cons, of any given topic. This will preserve the meeting knowledge and allow you to recall the discussion that resulted in any given decision. An example on “Should I loose weight?” is illustrated to show the usage of this form.

VISUAL Manufacturing
Implementation Workbook

Description: FORCE FIELD ANALYSIS		Tab: 4
Document # IMP-T4-FORM414	Revision: 1	Dated: Jan 9 2001
Page: 1 of 1	Document Owner (Title & Name): ACCOUNTING - DEB	

Purpose/Scope:
This worksheet is used to help resolve a conflicting decision to be made by recording driving and restraining forces or pros and cons of any given topic. This will also preserve the meeting knowledge and allow you to recall the discussion that resulted in any given decision.

Related Documents:
IMP-T4-FORM410 Team Meeting Notes

Topic: DETERMINE IF "ACTUAL" COSTING IS TO BE USED.

DRIVING FORCES	RESTRAINING FORCES
<u>ACTUAL COSTING IS REAL \$'S</u> →	← <u>CURRENT IS STANDARD COSTING.</u>
<u>BANK RECOMMENDS ACTUAL.</u> →	← <u>TO SWITCH WILL ADD TIME.</u>
<u>MSB RECOMMENDS ACTUAL.</u> →	← <u>TRAINING.</u>
→	←
→	←
→	←
→	←
→	←

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The things that compel a "Yes" decision

The topic being considered (Usually a question)

The things that resist a "Yes" decision

Tab 5 - Current Business Processes (before VISUAL)

This section documents a model of the current business processes as it exists today before any implementation effort is taken. Current business processes are also referred to as reference models. It is very important to understand current processes even if they are not optimal. Documentation of current processes allows you to study the effects of a proposed process change before making changes. It also insures that every business requirement is properly addressed.

Current Business Processes (IMP-T5-FORM510)

Current Business Model (IMP-T5-FORM512)

Tab 6 - Training Key Resources

This section is dedicated to all-training requirements and notes during the implementation period. Ensure to focus this section on the learning requirements. It is to be used for VISUAL class notes about implementation questions, issues, comments and even during team meetings that concern training. After the implementation phase, the Continuing Education section of the Standard Operating Procedures will provide for professional growth as well as cross training of backup personnel.

Training Requirements (IMP-T6-FORM610)

Training Notes (IMP-T6-FORM612)

Tab 7 - Configuration Data Definitions

This section provides key company and database configuration worksheets for data definitions that must be setup by management and the core team. These definitions are referred to as “key” data definitions due to the impact and operations for both your company and how VISUAL will function.

Many of these are onetime settings and can not be changed without major re-engineering.

Key definitions include, but are not limited to, general ledger interface accounts, costing methods, inventory valuation, part cost rollup, and other global application settings.

Mfg. Application Global Worksheet (IMP-T7-FORM710)

Document Auto Numbering Scheme (IMP-T7-FORM712)

Currency Worksheet (IMP-T7-FORM714)

Fin Application Global Worksheet (IMP-T7-FORM716)

G/L Interface Accounts (IMP-T7-FORM718)

Tab 8 - Static Data Definitions

This section provides many forms or configuration worksheets for all the static data definitions that need to be setup with in VISUAL. These definitions are referred to as static data definitions for two reasons. The data may stay the same after setup for a few entries (like unit of measure), or the data format will stay the same for large number of entries (like part maintenance).

Customer Maintenance Worksheet (IMP-T8-FORM810)

Discount Codes Worksheet (IMP-T8-FORM810-1)

Sales Rep Worksheet (IMP-T8-FORM810-2)

Employee Worksheet (IMP-T8-FORM812)

Earning Codes Worksheet (IMP-T8-FORM812-1)

Indirect Codes Worksheet (IMP-T8-FORM812-2)

Shift Definition Worksheet (IMP-T8-FORM812-3)

Part Maintenance Worksheet (IMP-T8-FORM814)

Hold Reasons Worksheet (IMP-T8-FORM814-1)

Product Codes Worksheet (IMP-T8-FORM814-2)

Commodity Codes Worksheet (IMP-T8-FORM814-3)

Shop Resources Worksheet (IMP-T8-FORM816)

Operation Types Worksheet (IMP-T8-FORM816-1)

Service Worksheet (IMP-T8-FORM818)

Unit of Measure Worksheet (IMP-T8-FORM820)

Unit of Measure Conversions (IMP-T8-FORM820-1)

Sales Tax Group Worksheet (IMP-T8-FORM822)

Vendor Worksheet (IMP-T8-FORM824)

Warehouse & Location Worksheet (IMP-T8-FORM826)

Warehouse Maintenance Transit Times Worksheet (IMP-T8-FORM826-1)

Part Trace Profile Worksheet (IMP-T8-FORM828)

VISUAL Messages Worksheet (IMP-T8-FORM840)

Account Worksheet (IMP-T8-FORM850)

Allocations Worksheet (IMP-T8-FORM850-1)

Bank Account Worksheet (IMP-T8-FORM858)

Tab 9 - Revised Business Processes (with VISUAL)

This section documents a model of the business processes as you want them to exist after the implementation effort. The revised business processes are also referred to as solution models. It is important to work with these revised processes in combination with the current processes and understand or study the effect and impacts of the proposed changes. Provided in the “Standard Operating Procedures” are nine “Process Flow charts” that detail VISUAL process flows. These can be used as a starting point for your specific models.

Revised Business Processes (IMP-T9-FORM910)

Revised Business Model (IMP-T9-FORM912)

Tab 10 - Open Issues and Report Changes

This section provides a single location to maintain, track, and prioritize open issues, reported problems and changes to reports that need to be formatted, modified, or custom created. This is a multistep process starting with the “Problem Report” pad sheets that are submitted by all users and collected for core team review. The core team reviews and correlates problem reports into an “Open Issue Form”, including logging and prioritizing. The “Check Sheet” pad is then given out to determine frequency of occurrence and to substantiate priorities.

Open Issue Log (IMP-T10-FORM1010)

Open Issue Form (IMP-T10-FORM1012)

Report Change Log (IMP-T10-FORM1014)

Report Change Request Form (IMP-T10-FORM1016)

Test Plan (IMP-T10-FORM1018)

Pilot Run(s) Planning (IMP-T10-FORM1020)

Tab 11 - Company Glossary

This is a list of terms that are unique to your business or organization. When developing process documentation and procedures, it is very important to use consistent terms and to ensure that all personnel have the same understanding of its meaning. When possible, reference industry standard term definitions like the “APICS” dictionary.

Company Glossary (IMP-T11-FORM1110)

Tab 12 - Gantt Chart

A Gantt chart is a command project management tool using Microsoft Project or a viewable only version is Microsoft Excel. This is in a template format and has a detailed list of 700+ task assignments. You need to remove the tasks that are not applicable to your implementation project.

Implementation Gantt Chart (IMP-T12-DOC1210)

Standard Reports Book

This book contains the entire group of standard VISUAL reports sorted by business function. Each is identified with its report *.grp name and the menu location from where the report can be printed.

The purpose of this booklet is providing management a fast and easy tool to determine what reports will best meet the need of your company. After these reports are selected, the format and function review can begin.

The standard reports are grouped into business functions as follows:

Tab 1 - Estimating & Quoting

Tab 2 - Engineering

Tab 3 - Sales & Customer Service

Tab 4 - Material & Serving Planning

Tab 5 - Production Control

Tab 6 - Throughput

Tab 7 - Purchasing

Tab 8 - Receiving

Tab 9 - Inventory Management

Tab 10 - Shop Floor Control

Tab 11 - Shipping

Tab 12 - General Ledger

Tab 13 - Financial Reporting

Tab 14 - Accounts Payable

Tab 15 - Accounts Receivable

Tab 16 - Cash Management

Tab 17 - Cost Accounting

Tab 18 - Invoicing

Tab 19 - VISUAL EIS

Tab 20 - Payroll

Tab 21 - Human Resources

Tab 22 - System

Standard Operating Procedure Documentation

The Standard Operating Procedure Documentation binder is a series of living documents used to document your process flows, operating procedures, work instructions, rules of operation, maintenance procedures, metrics, and continuing education for the entire life cycle of your VISUAL Manufacturing system. These documents will be key to successful operations after you go live. The framework is laid out for the binder and online documents, ready for you to modify to meet your operational needs. The Standard Operating Procedures are used to create the online documentation system. The binder is divided into eight sections (tabs).

Tab 1 - Process Flow Overview

This Process Flow Overview chart shows the major hi-level functions in producing a product and the associated VISUAL windows. This process overview presents an introduction to functions as well as the window / menu terminology used to represent that function.

Process Flow Overview (SOP-T1-DOC110)

Tab 2 - Process Flow Charts

The Process Flow Charts detail each functional area with in VISUAL available to produce product from Quoting & Estimating through accounting and invoicing. These flow charts are created in Visio Professional and are available for modification to best match your company flow.

Quoting & Estimating Flow Chart (SOP-T2-DOC210)

Customer Order Flow Chart (SOP-T2-DOC212)

Engineering Design Flow Chart (SOP-T2-DOC214)

Production/Scheduling Flow Chart (SOP-T2-DOC216)

Purchasing/Receiving Flow Chart (SOP-T2-DOC218)

Inventory Control Flow Chart (SOP-T2-DOC220)

Manufacturing Flow Chart (SOP-T2-DOC222)

Shipping Flow Chart (SOP-T2-DOC224)

Accounting Flow Chart (SOP-T2-DOC226)

Tab 3 - Operating Procedures

Operating Procedures are hi-level procedures that are set by management to determine the company's functional operations in producing product. Procedures define what will be done, where and when to meet the needs of the company, but not how. Each procedure should make reference to work instructions (tab 4) that define how an activity is performed.

Quoting & Estimating Procedure (SOP-T3-PROC310)

Customer Order Entry Procedure (SOP-T3-PROC312)

Engineering & Job Definition (SOP-T3-PROC314)

Scheduling Procedure (SOP-T3-PROC316)

Material & Service Planning (SOP-T3-PROC318)

Throughput Analysis (SOP-T3-PROC320)

Purchasing Procedure (SOP-T3-PROC322)

Receiving Procedure (SOP-T3-PROC324)

Inventory Management Procedure (SOP-T3-PROC326)

Shop Floor Control & Management (SOP-T3-PROC328)

Data Collection Procedure (SOP-T3-PROC330)

Shipping Procedure (SOP-T3-PROC332)

Service & Repair Procedure (SOP-T3-PROC334)

Invoice Procedure (SOP-T3-PROC336)

Manufacturing Costing Procedure (SOP-T3-PROC338)

VISUAL Messaging Procedure (SOP-T3-PROC340)

General Ledger Procedure (SOP-T3-PROC342)

Accounts Payable Procedure (SOP-T3-PROC344)

Accounts Receivable Procedure (SOP-T3-PROC346)

Human Resources & Payroll Procedure (SOP-T3-PROC348)

Tab 4 - Work Instructions

Work Instructions describe how an activity is preformed. The details to how an activity is done depends upon methods used, skills needed, and the training required. Work instructions should be created to ensure consistent operations for those already trained and not as a training tool for the untrained. The more detail that is incorporated the higher the possibility that the work instruction will not be maintained.

Quoting & Estimating Work Ins. (SOP-T4-WORK410)

Customer Order Entry Work Ins. (SOP-T4-WORK412)

Engineering Master Design Work Ins. (SOP-T4-WORK414)

Scheduling Work Instruction (SOP-T4-WORK416)

Material Planning Work Instruction (SOP-T4-WORK418)

Purchasing Work Instruction (SOP-T4-WORK422)

Receiving Work Instruction (SOP-T4-WORK424)

Inventory Control Work Instruction (SOP-T4-WORK426)

Shop Floor Control Work Instruction (SOP-T4-WORK428)

Shipping Work Instruction (SOP-T4-WORK432)

Invoice Work Instruction (SOP-T4-PROC436)

Accounts Payable Work Instruction (SOP-T4-WORK444)

Accounts Receivable Work Instruction (SOP-T4-WORK446)

Tab 5 - Rules Of Operation

This Rules Of Operation section is intended to be a database entry guide, to ensure consistent formatting, and entry of data throughout the entire life cycle of VISUAL Manufacturing. The benefits of this section will be seen years after you go live. The better the structure of your data entry the more meaningful your data will be to you. Items covered are case sensitivity, address formatting, and G/L account usage.

Global Database Rules (SOP-T5-DOC510)

Quoting Rules (SOP-T5-DOC512)

Customer Rules (SOP-T5-DOC514)

Tab 6 - Maintenance Procedures

This section covers procedures that are required to maintain the database and operational systems, but are not part of the procedures to produce product. Maintenance procedures include, but are not limited to, database backup, restore, reorganization, and month-end close.

Month End Close Procedure (SOP-T6-PROC610)

Reorganize Database (SOP-T6-PROC612)

Restore Database Backup (SOP-T6-PROC614)

Tab 7 - Measurable & Comparative Reports

This section is used to store measurable and comparative reports. Once your system is live, you should start measuring your progress toward meeting your original goals and objectives.

Measurement Tracking (SOP-T7-PROC710)

Tab 8 - Continuing Education

This section continues where training key resources leaves off from the implementation workbook. Use this section to maintain an ongoing training program on a regular basis. This should include training users on new software releases, cross training users, conducting education in a broader scope than just VISUAL and training new users.

Continuing Education (SOP-T8-FORM810)

Information System Documentation

The Information System Documentation binder is a series of forms used to document your network, server, and client hardware and software. The binder also includes a correspondence section for each major support function. These

documents will be key in technical trouble shooting of both the software and hardware operations. This binder should become a living document and be maintained throughout the life cycle of your VISUAL installation. The binder is divided into the following eight sections (tabs).

Tab 1 - Network Configuration

This form is used to record the network configuration. Each time the network is revised or changed this document is to be updated by the owner. The document can also be used for cross training.

Network Configuration (SYS-T1-FORM110)

Tab 2 - Server Configuration

This form is used to record the server(s) configuration. If you have more then one server, use one form for each server. Each time the server is revised or changed this document is to be updated by the owner. This document can also be used for cross training.

Server Configuration (SYS-T2-FORM210)

Tab 3 - Client Configuration

This form is used to record each workstation or group type configuration. Each time a workstation is revised or changed this document is to be updated by the service owner. This document can be very useful for technical support and licensing information.

Client Configuration (SYS-T3-FORM310)

Tab 4 - Front End Software

This form is used to record the technical configuration VISUAL Manufacturing. Each time a software component is updated this document is to be revised by the owner. This document can be very useful for technical support and troubleshooting.

VISUAL Manufacturing Front-End Configuration (SYS-T4-FORM410)

Tab 5 - Back End Software

This form is used to record the back-end configuration of VISUAL Manufacturing (i.e. database). Each time a module is updated this document must be revised by the owner. This document can be very useful for technical support and troubleshooting.

VISUAL Manufacturing Back-End Configuration (SYS-T5-FORM-510)

Tab 6 - Lilly Software Associate Correspondence

This form is used to list all Lilly Software Associates' contacts. Important contacts and events should be indexed on page. Once indexed, place copies of the correspondence in this tab. This will provide an accurate history of past correspondence.

Lilly Software Associates Correspondence (SYS-T6-FORM610)

Tab 7 - Computer Support Correspondence

This form is used to list all computer support contacts. Important contacts and events should be indexed on page three. Once indexed, place copies of the correspondence in this tab. This will provide an accurate history of past correspondence.

Computer Support Correspondence (SYS-T7-FORM710)

Tab 8 - Other Correspondence

This form is used to list all other support contacts required to operate your business that are related to this implementation. Important contacts and events should be indexed on page three. Once indexed, place copies of the correspondence in this tab. This will provide an accurate history of past correspondence. Be sure to also include your company's contract information on the form.

Other Correspondence (SYS-T8-FORM810)

Documentation Style Guide

This document's purpose is to clarify the standards and rules that your company will produce printed and online documentation so that a consistency of tone, style, and usage can be maintained throughout your documentation. The style guide is a living document. Your documentation coordinator or group should review and discuss the topics of this guide with all document owners and continue to revise and clarify the information to improve the usefulness of this style guide. It includes the covers for all binders included in the toolkit for you to customize.

Problem Report – Note Pad

The Problem Report note pad provides a structured manner to report problems found in software or procedures. The core team then collects and correlates them for a formal review to determine impact and priorities as open issues. The first pilot run may be a good time to start their use so as not to confuse training issues with operational and functional issues.

Check Sheet – Note Pad

The Check Sheet note pad determines the frequency of problem occurrence. As a first step in problem solving, the check sheet gathers data to substantiate priorities in problem solving. This sheet detects patterns in the cause of an event. The check sheet translates opinions into facts.

Using the CD-ROM

What is on the CD-ROM?

The CD supplied in the Implementation Toolkit contains the following:

Acrobat Reader

- ☐ Complete contents of each three-ring binder in two formats:
 - ☐ as PDF files for printing by Acrobat Reader direct from the CD
 - ☐ the entire set of master documents
 - ☐ Implementation project Gantt chart
 - ☐ Online documents in PDF format used to start your Intranet
 - ☐ Implementation Kickoff Presentation

The CD provides a single source to print any of the three-ring binder blank forms and documents directly from the CD. The CD also contains the master documents for the three-ring binders. These master documents are to be used as templates for your implementation. The Gantt chart lists all the tasks required during the implementation project. The Implementation Kickoff Presentation is a great visual aid used during your VISUAL kickoff meetings. The Online Documents are used to start your Intranet documentation system. They are living documents that are your standard operating procedures. These living documents go beyond the implementation cycle. The Standard Operating Procedure Documentation is a series of living documents used to document your process flows, operating procedures, work instructions, rules of operation, maintenance procedures, matrices, and continuing education for the entire life cycle of your company's enterprise resource planning system. These documents will be key to successful operations after you go live. The framework is laid out and is ready for you to modify as needed to meet your operational needs.

Installing the Software

The Implementation Toolkit CD program runs from the CD-ROM drive. The CD is used to view and print the Kickoff Presentation, any of the three-ring binder forms, and the Gantt chart. The CD is also used to install Adobe Acrobat Reader, the Intranet online document (living documents), the entire set of master documents

for the binders, and the custom formatted VISUAL reports. The online document structure is for the Standard Operating Procedure Documentation (also called the living documents). These documents need to be installed onto your computer network. Then Acrobat Reader needs to be installed onto each computer that is to have access to these living documents. The last step is to setup the reader path to point to the network drive that contains the online documents cover page that links all of the standard operating procedures.

You must have the CD-ROM inserted into your drive to run the setup program.

Running the Program

Insert the VISUAL Manufacturing Implementation Took Kit CD-ROM into your CD-ROM drive. The program has an autorun feature that automatically opens the program when you insert the CD into the drive.

***Note:** You must have the autorun feature enabled in Windows. To set the autorun feature, follow the steps below.*

1. Open Control Panel and double-click the system icon...the properties dialog box appears.
2. Click the **Device Manager** tab.
3. Under the computer icon, locate the CD-ROM icon and double-click it to open the drop-down for the CD-ROM devices installed.
4. Select your CD-ROM.
5. Click **Properties**. Your CD-ROM properties dialog box appears.
6. Click on the **Settings** tab.
7. In the options section, insure Auto insert notifications check box is selected.
8. Click **OK**.

To run from Windows Explorer, go to your CD-ROM drive and select it.

***Note:** If you exit by mistake, open and shut your CD-ROM drive to restart the autorun program.*

You must have Adobe Acrobat Reader installed on your machine to be able to view the files contained within this program!

If you do not have Microsoft PowerPoint, Excel, or Word free “viewers” are available from Microsoft’s web site at: <http://www.microsoft.com>.

Navigating the CD-ROM

With the Toolkit open, pass your cursor over the three books. You will notice the books change color and a text box containing the name of the book appears. When you have located the appropriate book, click on it to display a scrolling text box containing the tabbed sections and titles for that book. Click on a tab folder to display the contents. Then click on any document with in that tab and Adobe Acrobat reader will open your selected document.

For information on using the Adobe Acrobat Reader, click the help menu.

To exit the Toolkit CD, click on the Exit button at the bottom of the window.

Programs Required

Software Programs used in the Implementation Toolkit:

- ☐ Adobe Acrobat 4.0
- ☐ Microsoft Word 97
- ☐ Microsoft Excel 97
- ☐ Microsoft PowerPoint 97
- ☐ Microsoft Project 95
- ☐ Visio Standard

The Adobe Acrobat program provides a tool for universal document exchange. You can use Acrobat to publish virtually any document in Portable Document Format (PDF). Acrobat Reader is the free version that can be used to view and print PDF files. The full version of Adobe Acrobat is required to create and modify PDF files. Documents in PDF preserve the exact look and content of the originals complete with fonts and graphics.

They can be distributed by e-mail or stored on the World Wide Web, an intranet, a file system, or a CD-ROM for other users to view on Microsoft Windows, Mac OS, and UNIX platforms.

All the documents created in Microsoft Office can be opened, modified and re-saved in other office suites like Lotus. If you do not have PowerPoint, Microsoft also has a free PowerPoint Viewer program available for download from their web page. Due to Microsoft licensing requirements we were unable to provide the program on this CD.

The Gantt chart was created in Microsoft Project 95 format. If you do not have Project 95 or newer, we have also provided the Gantt chart in Excel format. Microsoft does not provide a free Project viewer program, but they do offer Project for a free trial period.

The Excel formatted Gantt chart will give all the task lists in order, but it does not give the scheduling features built into Project. In addition, we also provide the Gantt chart in PDF format for viewing and printing.

Visio Standard is the program that we used to create the process flow charts in tabs one & two of the Standard Operating Procedure Documentation binder. These Visio flowcharts are embedded into the Word documents and can be edited with Visio.

Customizing your Standard Operating Procedure Documentation

The online document structure is for the Standard Operating Procedure Documentation (also called the Living Documents). These documents must be customized to represent the operations of your company once they have been installed on your computer network.

The master documents for all the Standard Operating Procedures are in Microsoft Word format. All of the master documents are located on the Toolkit CD and are available to be installed onto your network. The master documents should be installed onto your network to provide one controlled location for users to save their standard operating procedures once they have been customized to represent the operations of your company.

The Standard Operating Procedure Documentation goes beyond the implementation phase into the operational life cycle of VISUAL Manufacturing. By maintaining these documents throughout the life cycle, they become “living documents”. The

procedures provided are samples and must be modified to reflect your companies operations. These procedures represent a base-line set of system documentation and can be expanded into complete ISO quality system documentation. As your company grows, so does the need for documented operating procedures.

One key for a good documentation structure is to always remember there are four levels of documentation:

Level 1 - Management Level–Quality Manual. Level one states the policies for each system.

Level 2 - Supervisor Level–Operating Procedures. Level two states who is responsible for what and when does it apply.

Level 3 - Task Level–Work Instructions, Forms, & Documents. Level three states details of how it is to be done.

Level 4 - Completion Level–Supporting Evidence. Level four states where records are filed and maintained.

The next step after a word master document has been updated is to create the Portable Document File (PDF) by distilling the file with Acrobat. The distilling process is as fast and simple as printing a file. However, it does require the full version of Acrobat.

We recommend that your documentation control group be responsible for creating PDFs to limit the number of licenses required for the full version of Acrobat and for ease of revision control with in your Intranet online documentation.

The last step is to update your Intranet online documents with the newly created PDF file that was just created from the Microsoft Word master document. Moving the PDF document into the “Online Documents” folder within your network with the same name as the existing sample accomplishes this. As long as the same file name is used as the original template, all document links will be maintained.

Any user can access all the updated living documents by using the free Acrobat Reader. This eliminates the need to print, distribute and track copies of who has what procedure.

Setting up the Online Documents

There are many ways to create networked online viewable documents. One of the more common ways is to use HTML code like that used to create Internet web pages. However, HTML coding requires extensive education and dedication of resources.

We chose a method that we believe is easy to create and maintain. The Acrobat program has several built-in features. Acrobat creates and works with Portable Document Files (PDFs.). The PDF files can be created from any document that can be printed or scanned. This method allows your company personnel to continue to use their existing and known software for document creation.

We will give you two important systems for use after the VISUAL implementation phase and throughout the entire life cycle of your VISUAL system.

First is the framework for the Standard Operating Procedures, which are your living documents. Second is the Online Document system that provides an easy, fast, controlled, and secure method of providing up to date documents to everyone in your company. Time and time again two major issues arise after initial implementation:

1. Lack of operating procedures
2. Lack of everyone having current procedures

The Standard Operating Procedures supplied is a framework to start from. These procedures must be changed to reflect the operations of your company. Once modified, the next step is to update your Online Documentation system. In the past, this would mean that many copies would need to be printed, stamped as “controlled,” distributed, and recorded into a distribution list. Now, with the Online Documentation system, this process is greatly simplified. With the help of Acrobat, all that is needed to do is print to the PDF-writer to create the Portable Document file and save it to the “Online Documents” folder on your network and your done.

How do the users view these online documents? The free Acrobat Reader can be installed on every workstation. All the user needs to do is open their free copy of reader to view any of the files in the “Online Documents” folder on your company’s network, also called your Intranet system.

Note: *With the Acrobat Reader users can only view and print documents.*

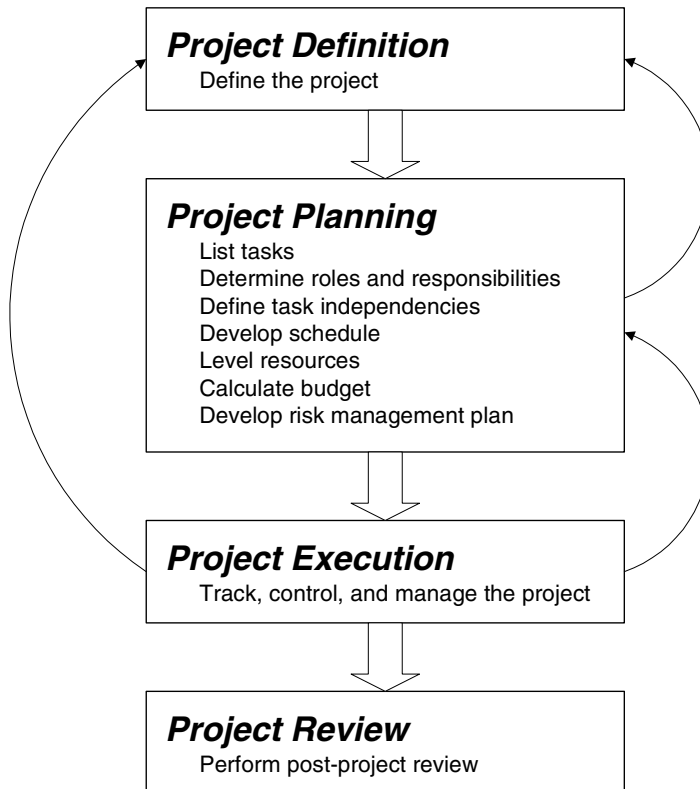
4

Chapter 4 - VISUAL Manufacturing Implementation

VISUAL Manufacturing Implementation

As with any large project, it is critical that a VISUAL Manufacturing implementation be well managed. To that end, we will structure this discussion within the framework of a project management approach.

The typical project management approach breaks a project into four basic phases as the diagram below indicates. We will use this basic approach to develop our implementation discussion.



Project Management Overview

Before we dive into the actual steps you will go through to implement your VISUAL database, let us offer a brief overview of Project Management.

We believe that structuring your implementation around a project management methodology will help you accomplish the most successful implementation you possibly can.

Project management can be a tough concept to grasp. To help solidify the concept for you, we offer some of the common project management definitions:

Picture goes here.

Definition: *Project management is a set of processes, systems, and techniques for effective planning and control of projects and programs.*

Project management is the application of knowledge, skills, tools, and techniques in order to meet or exceed stakeholder requirements from a project. This means balancing competing demands on scope, time, cost and quality.

The essence of Project Management is deciding **what** we are trying to achieve, then how we are going to achieve it.

Some of the many benefits of using a project management technique to manage a project include:

- ☐ Fosters open communication
- ☐ Helps comprise specific deliverables
- ☐ Keeps management and project clients aware of progress
- ☐ Provides a historical account of the project and a model for future planning
- ☐ Aids in scheduling subcontracted portions of the project
- ☐ Helps alert team members to potential bottle necks in advance
- ☐ Provides basis for considering tradeoffs between resources, scope, time and quality

- ☐ Easy turnover of project to a new project manager
- ☐ Focus is on problem resolution

On the flip side here are some commonly cited negative aspects of using a project management approach:

- ☐ Requires too much time and extra head count
- ☐ Creates administrative overhead and expense for the project
- ☐ Too structured—limits the flexibility of the implementation
- ☐ Too complicated of an approach—hard for the average team member to grasp

It is important to note that even though there are some valid negatives to the project management approach, the team involved in the implementation really needs to accept some level of structure in the implementation process. A structured approach will help insure that the team is working in an efficient manner and the people with the right skill sets are involved at the right times.

We will now offer a detailed discussion of the VISUAL implementation within the context of the project management framework depicted in the diagram on the previous page.

First, we will take you through all of the preliminary steps required to successfully organize the project in the **Project Definition** portion. Then, once the project is defined, we will layout a schedule for the project in the **Project Planning** phase. This requires identifying the tasks and resources available, mapping them out based on availability and dependencies, and developing a budget based on costs.

Now it's time to get to work. The **Project Execution** part of the project is where we execute our plan. More importantly, we closely monitor our progress against the intended plan and take action where necessary. As indicated by the arrows in the diagram, there may be times when we need to back up and adjust our plan or even change the definition of the project.

The intent here is not to cover up mistakes and problems. Rather, it is to closely track anything we have discovered along the way.

For that reason, it is important to maintain a baseline copy of the initial project definition and plan. We can then compare revised versions of the plan to this baseline and use the baseline as a measurement device. Microsoft Project has this capability built into the software. You can always track your initial project estimates and compare them to how you are actually progressing. This will be especially crucial during the first few weeks of the project. This will allow you to make a quick judgment of how realistically you have established your time line for the work at hand. Keep in mind that it is very difficult to “make up” time later on in the project.

Keeping a baseline will also be very handy during the **Project Review** portion of the project. This is when we can look back at all that we have learned during the implementation and reflect on the challenges that we faced and the lessons we learned.

Project Definition

Define the Need

It is important to note that our discussion assumes that there has already been a fair amount of discovery completed. We assume that your organization has performed some level of needs-analysis in order to weigh and compare a number of different systems. Now that you have selected VISUAL, we will briefly revisit some of these issues to help you quantify what you hope to achieve with your new VISUAL system.

To reduce the risk of project failure, a clear definition of what will and will not be achieved by each project is essential. The first part of this is to define the need. There must be some business need, a current deficiency, which is driving the project. It is crucial that this is quantified. Perhaps the best way to do this is to ask a series of questions.

Some possible questions include:

- ☐ Why are we doing this?
- ☐ When the project is complete, what will I get for my money?
- ☐ How can I be confident that progress will be maintained?

Answering these questions will help you decide which VISUAL modules need to be implemented and structure the scope of your project.

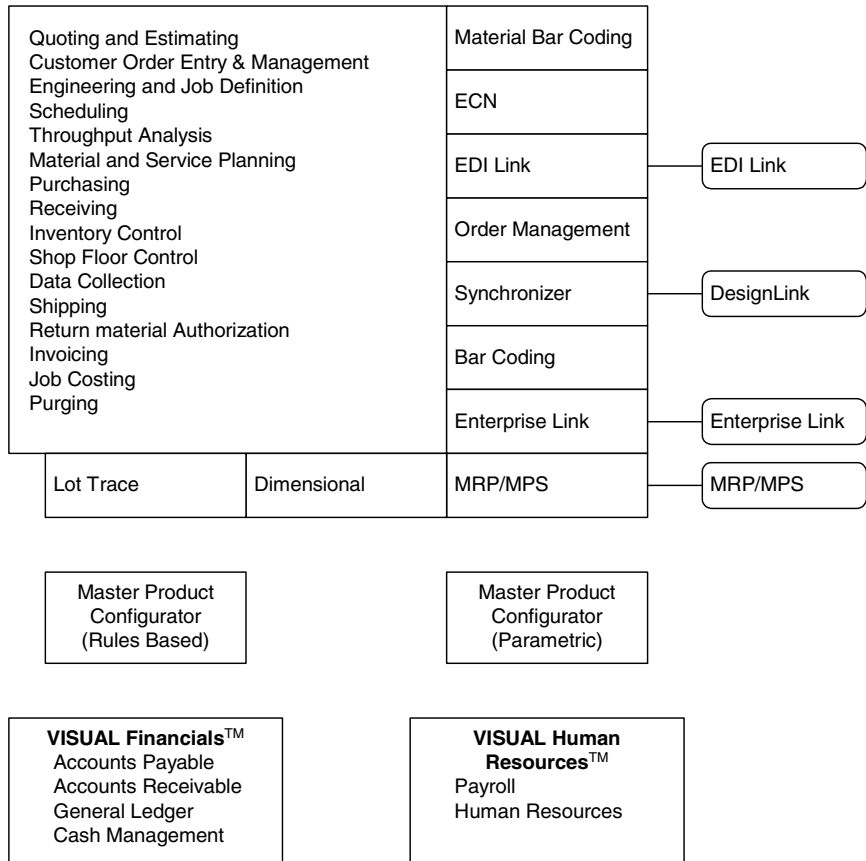
Which Modules are to be Implemented?

The chart below schematically represents the entire VISUAL Manufacturing suite. Your actual implementation will only consist of some components of this suite. Perhaps your implementation calls for only implementing a few features at first followed by others over a fairly long period of time. It can be beneficial to highlight the modules being currently implemented in one color and those to be implemented later in another color. This will give the implementation team some perspective on the effort being undertaken and give them a vision of what lay ahead. It also can help serve as explanation of why some fields or windows that they may encounter are not being used presently.

If third party products are being implemented in conjunction with the VISUAL implementation, it is a good idea to include those on this schematic diagram.

Once the drawing has been highlighted it is then a fairly easy exercise to delete from the Gantt chart those tasks that are related to modules that are not being implemented.

VISUAL Manufacturing™



Establish Objectives and Goals

It may sound like common sense but your project will not succeed without being driven by a set of clear objectives and goals. These objectives/goals will reinforce your project definition and drive the direction and resource planning decisions. The goals/objectives you establish for your implementation will help define the success criteria for the project. Objectives are typically defined by senior

management and reflect the purpose for which VISUAL was purchased. These are typically things like “decrease inventory”, or “improve on-time delivery.” Goals are established to support each objective typically by middle management or those charged with making the objectives happen. Goals are specific targets that are aimed at to achieve the objectives in the long term. Your goals must be stated clearly and meet some general criteria to insure their merit.

Some criteria include:

- ☐ Specific
- ☐ Measurable in quantifiable terms
- ☐ Agreed upon by all team members
- ☐ Relevant to the mission
- ☐ Time framed

Toolkit Forms: Objectives - IMP-T1-FORM110 and Goals - IMP-T1-FORM112.

Definition: An objective is a high-level business decision which is made to steer the direction of the business.

Definition: A goal is established by middle management to support each objective and is viewed as a specific target.

Critical Success Factors

Critical Success Factors (CSF) are the objectives that, if all else fails, you must meet for the project to be deemed successful. Even if all other objectives (other than those designated as a CSF) are achieved, missing just one of these factors deems your implementation less than a complete success. You may be successful in individual parts of the project, but the project as a whole will fall short of the initial specifications.

From the list of objectives, select those that are critical or key to the success of the project. These are the items that are critical to those who will benefit from the project and those with the responsibilities for judging success criteria (managers, customers, members, shareholders, etc.).

The purpose of this is twofold. First - clarify in the minds of the project team and service managers what are the essential benefits that the project will deliver. Second, if circumstances change within the life of the project, it is useful to see what were the agreed success criteria at the start of the project. The project may then be re-planned to ensure the CSFs are met. The CSFs may be formally changed, (by Senior Managers in the light of changed circumstances), and the project redefined and re-planned to help the team strive to meet the newly established CSFs.

Toolkit Forms: Objectives - IMP-T1-FORM110.

Establishing a Project Charter

Your project team needs a clear mission. One way to capture that mission in a concise way is an explicit, measurable project charter. Such a charter sets broad performance objectives and usually is articulated even before the core team is selected. Establishing the charter first helps reinforce the message that joining the core team includes accepting the charter established by senior management.

The Project Charter, which is the contract between the clients and developers of the project, is the place to set the stage for the future success or failure of the entire business project. By clearly defining scope, risk, constraints, roles, and communication plans, confusion can be eliminated before it has started. Scope creep is the primary problem experienced in projects everywhere. By establishing a definitive scope document within the Project Charter, you help eliminate this risk from the start.

You may struggle with creating a statement that captures all of your parameters and keeping it concise. Use these examples as a guide and remember that the longer the statement is, the more it will tend to ramble. Your readers may lose the message due to the length of the Charter.

Kick-off Meeting

Once you have identified the key members of your team, it is a good idea to have a kickoff meeting to introduce the team members to each other and establish a positive and upbeat outlook on the project. Remember that a lot of people that are affected by this implementation will be opposed to change and you are going to have to do everything you can to position the project in a positive light.

It may be a good idea to have your associate play a role in this meeting. The more knowledge relating to VISUAL that you can have in the room the better. At the same time, be careful that attendees don't view this as a "we" vs. "they" situation. It may be wise to have internal staff lead the meeting. You don't want users to ever view the system as something being imposed on them.

This meeting will not be the place to dive into great detail. Prepare some sort of an overview perhaps a PowerPoint presentation. Give a very high level overview of the project. Expose the team to the project definition, objectives and a high level plan of the project scope.

Constraints

Projects will always have constraints imposed on them. The most common constraints are time and money. Most project objectives are only deemed desirable if they can be met with a finite budget over a finite period of time. These are inherent constraints to your project. Without time and money limitations, just about any objective (realistic or not) could be attainable.

Realizing and publishing your known constraints will be very important when dealing with top management and your project sponsors.

These individuals will be very interested to see what you have identified that may inhibit your ability to meet your objectives. They are also the ones to sign off on acquiring more resources to help minimize your constraints.

Other possible constraints may include:

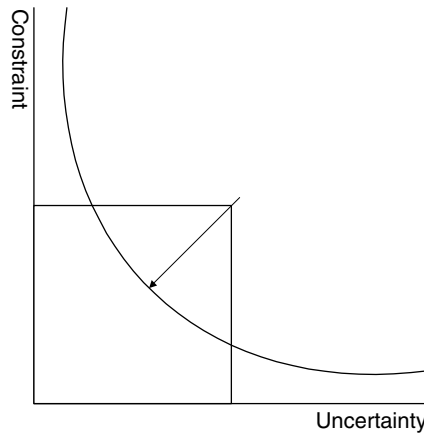
- ☐ Limited resources
- ☐ Ability to secure management involvement
- ☐ Company has never gone through a project of this scope
- ☐ Recent turnover

Risk Management

In order to manage risks we have to understand what a risk is. Let us offer a simple definition of a risk. "A risk is a combination of constraint and uncertainty." Let's use this definition to consider how you can reduce risk in your VISUAL implementation. You will face constraints in your projects. You will also face some

level of uncertainty as well. To this end, you can minimize the risk in the project either by eliminating constraints (sounds like a great idea, but obviously not that simple) or by finding and reducing uncertainty.

The diagram portrayed below, plots uncertainty against constraint. The curved line indicates an acceptable level of risk. The types of risks involved depend upon your specific case. Reducing either the uncertainty and/or the constraint can reduce the risk to an acceptable level. In practice, few people have the opportunity to reduce constraints, so most focus on the reduction of uncertainty. It is worth noting from the diagram that total elimination of risk is rarely achieved. So we have to consider how to manage that remaining risk most effectively.



There are two stages in the process of Project Risk Management:

1. Risk assessment
2. Risk control

Risk Assessment can take place at any time during the project. However, the sooner the assessment takes place, the better. As a matter of fact it is a wise idea to perform risk assessment at regular intervals through out your project. Risk Control, on the other hand, cannot be effective without a previous Risk Assessment. Most people tend to think that have done all that is needed once they have performed a Risk Assessment. Far too many projects spend a great deal of effort on Risk Assessment and then ignore Risk Control completely.

Risk Assessment has three elements:

Identify Uncertainties - Explore the entire project plans and look for areas of uncertainty.

Analyze Risks - Specify how those areas of uncertainty can impact the performance of the project either in duration, cost, or meeting the users' requirements.

Prioritize Risks - Establish which of those risks should be:

- ☐ Eliminated completely because of their potential extreme impact on the project
- ☐ Which should have regular management attention?
- ☐ Which are sufficiently minor to avoid detailed management attention?

Risk Control also consists of three distinct elements:

Mitigate Risks - Take whatever actions are possible in advance to reduce the effect of Risk. It is better to spend money on mitigation than to include contingency in the plan.

Plan for Emergencies - For all those Risks which are deemed to be significant, have an emergency plan in place before it happens.

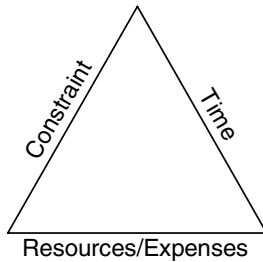
Measure and Control - Track the effects of the risks identified and manage them to a successful conclusion.

Project Planning

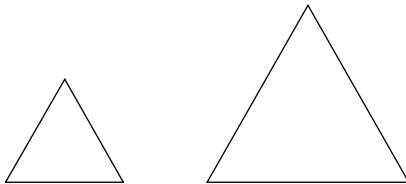
A Discussion on Scope

When the nucleus of the project team is assembled, its first order of business is to clarify the project. This requires defining the scope of the project and a strategy to carry it out. The key to successful organization of a software implementation project is to set realistic goals. It is okay to be a bit aggressive, but it is crucial to base your decisions, deadlines and budgets on reality.

The magic behind doing this lies in wrestling with scope, time and resources. Try envisioning each of these three ingredients at the side of a triangle.



The only way to lengthen the scope of the project is to add resources, add time or add both resources and time. As you can see changing one side of the triangle automatically changes the other two sides.



Since many of us are most closely constrained by time and money, we need to realize the immediate effects this has on scope. This can be a powerful image to use when explaining the need for additional resources to meet already tight project deadlines. This is also an important image to understand the ill effects of scope creep.

It is common that people will try and “stuff” additional tasks into the project plan without considering the effects on the overall project.

Keep in mind that this is a fairly simplistic model and there are other variables that may have substantial impact on your ability to successfully utilize this model. One variable is quality. Without considering quality, it is conceivable that you could increase scope and have no effect on resources or time. However, the overall implementation suffers because holes are sure to be discovered further down the line. In such cases, the expense of recovering from such a discovery can be extremely detrimental.

Having a wide variety of resources available is great, but what if there is no one available to manage the resources and make sure that people are working on the right tasks at the right time? We will talk more about this when we talk in detail about the various roles that need to be filled in the project. The key thing to remember is keep a close eye on progress and be able to identify inefficiencies and be able to react quickly and correctly to rectify such situations and keep the project moving in the right direction in an efficient manner.

As we move forward, the majority of this document will focus on resources and scope to help you plan your project effectively. We will now lay out all of the various tasks that will be necessary to successfully implement VISUAL and make sure that the right people are working on the right things to implement efficiently. Managing the project in this way will help us maximize scope while minimizing resources and expenses at the same time.

To manage a project effectively, you must precisely define the scope of work. This is done with precise definition of the project's objectives and goals, clear descriptions of all tasks required to meet those objectives and goals, and building a work breakdown structure.

There are a number of ways that you can go about defining the scope of your project. Brainstorming sessions are a great way to get input from everyone impacted by the project in one way or another. Try and get everyone to list what he or she wants to accomplish during the project without worrying how others will react to their ideas. What is important to accomplish? Why are we doing this? Who has the most to lose by not doing the project?

What visibility will this project have for our vendors, our customers, and our stakeholders? Based on the ideas and thoughts generated you can:

- ☐ Write the project definition
- ☐ Set an end result
- ☐ List imperatives and desirables
- ☐ Generate alternatives
- ☐ Evaluate alternatives
- ☐ Prioritize
- ☐ Choose a course of action
- ☐ Document the business requirements
- ☐ Designate needs vs. wants
- ☐ Outline phases of the project
- ☐ List the objectives and goals

SUG Techniques

Another way to realistically establish the scope of your project is by assigning a weight to the various tasks that you want to try and accomplish during your implementation. This can be an effective exercise right after a brainstorming session. After generating a laundry list of tasks to be completed, classify them as **S**urvival (reduce inventory, shorten lead time), **U**rgent (Y2K) and **G**rowth (new product opportunity). This is an effective way to weigh the merit of each task individually.

Teams, Roles, and Responsibilities

There are many players we must consider who will be involved with this project through the various stages of the implementation. The most obvious people are the ones who have a hands-on role in the project and will play crucial roles in helping to meet deadlines.

The less obvious players are those who will play the most vital roles in helping to ensure a successful implementation. Let's start by considering these roles.

We have all heard buzzwords such as “Champion”, “Sponsor”, “Implementation Coordinator”. Unfortunately, in many organizations these roles are simply buzzwords. Filling these roles will play an integral part in the degree to which the project is a success.

Toolkit Forms: Team Definitions - IMP-T3-FORM310 and Contact List - IMP-T3-FORM312.

Ownership

Establishing a champion for the project could very easily be the single most important part of your implementation. We use the word “establish” here very loosely. He or she should not be someone who is appointed, but someone who volunteers.

This project needs to be near and dear to this person’s heart. You are not likely to have that sort of passion for the project in someone who is appointed. This needs to be a person who is willing to step forward and take responsibility for the success of the project.

Often times she or he will be a high level person who first identified a need in the organization. She or he will be a valuable business partner for the IT staff and will be able to drive messages through the user community.

This role needs to be filled by someone who can both measure the value to be derived from a successful implementation as well as take responsibility for the outcome. Essentially this person must be “somebody with some skin in the game.”

Here are some handy points to remember when selecting a Team Sponsor:

- ☐ Secure a Team Sponsor who is an executive who can knock down team barriers and deal with organization resistance and politics
- ☐ Avoid a situation where the Team Sponsor is the boss of the Team Leader (if there is one)
- ☐ Clarify with the Team Sponsor candidate how much power the team has:
 - ☐ make recommendations only
 - ☐ empowered to implement within established guidelines

- ☐ Help the Team Sponsor draft a project Mission Statement that includes why the project is important, goals, constraints, and expected project duration
- ☐ Decide with the Team Sponsor the right pace of the project given its importance and availability of people and how long and often team meetings need to be
- ☐ Decide with the Team Sponsor if you will serve as the Team Leader or a team member will assess the readiness of this person to lead a team and manage a project
- ☐ Educate the Team Sponsor on his/her role and team boundaries

Steering Committee

By definition, a Steering Committee is a committee that determines the order in which business will be taken up by a larger organization. To that end, the role a steering committee can play in the context of a VISUAL Manufacturing Implementation is to prioritize tasks and project components. The Steering Committee brings the perspective of the overall organization and the major stakeholders in the organization.

While not the most appropriate group for a smaller company, larger companies can derive great benefit from such a group. Consistent with the name, the Steering Committee can guide the project team in a way that the goals of the implementation are consistent with and support the goals of the corporation.

Project Manager

The role of the Project Manager is a highly visible one and requires someone that can both immerse themselves into the details of the project as well as present a clear and concise representation of the project to the corporate sponsors and steering committee members. It is important to note that this person should most definitely be a person internal to your organization. Fill this role with someone who is dedicated to being a key stakeholder in your implementation project.

Implementation Coordinator

Depending upon the scope of your project and the resources available it may be preferable to fill the role of Implementation Coordinator. This is someone who works closely with the project manager but has a higher level of responsibility for the day to day details of the project.

Implementation Coordinator is a role that typically takes responsibility for overseeing data conversions, system testing, system customizations and many of the other tasks that are associated with the preparation for the actual conversion date. This person typically reports to the project manager. The project manager is then responsible for setting the priorities of the Implementation Coordinator to be in line with the overall objectives of the project itself.

The single biggest motivator for many firms to fill this role is that the project manager simply doesn't have the time to become immersed in the day-to-day details of the project. This person can be viewed as your "hired gun". Typically, she or he is a person who has vast experience with client/server data conversions and system implementations. The best case scenario is a person who has extensive VISUAL experience as well as experience with the database platform of your choosing. For this reason, he/she is typically a contract employee or outside consultant. Your LSA associate will be a good point of contact to advise you one whether or not to fill this role.

Many times in a small company this role is folded into the role of project manager. This is appropriate as the scope is usually much smaller and the responsibilities are easier for one person to manage.

Associate

Many times your associate will be your best resource to help insure a smooth implementation. The role most often filled by the associate could be characterized as an advisor. Your associate will typically be someone who can be available for 3-4 hours a week to help review progress and keep the project on track. The skill sets and availability will vary from associate to associate so be sure and find out this information up front so you can staff the project appropriately.

Don't forget that your associate has been through several implementations and although he or she may not be able to lead your charge they have surely seen an implementation similar to yours in the past. The associate can provide valuable insight into problem resolution and help you to prioritize and schedule your implementation.

A Discussion on Teams

At this point, I think it is safe to say that we have all heard about the importance of teams and teamwork in the organization. It really is a pretty simple concept rooted in common sense.

Unfortunately many corporations continue to struggle with organizing teams in an efficient and effective manner.

There are all kinds of great books on teams and teamwork but we don't want to regurgitate them verbatim. However, we will take some time to provide information on how to formulate teams, promote effective communication and build a more successful implementation.

A small team of skilled generalists is far more effective at basic system design and development for a new system project than a larger group of specialists. Two key concepts are embedded in this statement.

1. Don't fall prey to the common malady of letting everyone on the project team. A lean team can generally out perform a larger team even when the larger team has more quality individuals. Often we let people on the teams for the wrong reasons (e.g. we can't hurt his feelings, her boss said so, she is too smart not to bring aboard, he doesn't have anything else going on right now).
2. People with a great breadth of knowledge are generally a better choice than individuals with a depth of knowledge. The skilled generalists will be far more effective at seeing the big picture and pulling all the concepts and priorities together. They are also far less likely to harbor secret agendas and pull the project in a direction to better only themselves.

Some of the most pronounced advantages to be gained by structuring your workers into teams include:

- ☐ Improvement in work methods and procedures
- ☐ Increased staff flexibility
- ☐ Decision making improves and there is greater buy in on decisions
- ☐ Strengthens skills of more junior team members

This is not to say that organizing into teams can guarantee success. The most common reason for team failure develops from the problems that teams suffer such as internal conflict, member anxiety and frustration, time wasted on irrelevant issues, or haphazard decisions made by the dictate of senior member. Team members are often more concerned with getting the task done as opposed to doing a quality job. Many teams never even know the purpose of their team, so they have no clue when they have achieved their goal.

Cross Functional Team Discussion

A common way to structure teams during a VISUAL implementation is to work in cross-functional teams. Such a format allows workers from across the organization work together to share their ideas and perspectives. It is a great way to insure that no group is overlooked and that everyone receives the opportunity to voice his or her concerns.

A common practice is to also have smaller teams with members from similar functional areas. Members of these teams can then come to decisions on issues that they face and take this information back to the higher level cross-functional teams. Your organization is likely to have a Manufacturing Team, Financial Team, and a Systems Team as well as possibly some other teams depending on which modules you implement.

Again, there are several books on this topic (see the Bibliography). So, rather than re-create the wheel, let's simply offer a high level overview covering some of the key concepts regarding cross-functional teams.

Toolkit Forms: Team Definition - IMP-T3-FORM310.

Why Cross-Functional Teams?

Most serious company problems are rooted in several company functions. For example, a company can't do time compressed product development without all parties working together to make trade-off decisions between market, technology, manufacturing, and service issues.

Or, to optimize a process in a major company (like order fulfillment) all the stakeholder groups need to be represented including sales, order entry, finance, manufacturing, and shipping.

Working with Cross-Functional Team Dynamics

Each team is composed of people from several departments. A process improvement team could have representatives from sales, order entry, finance, manufacturing and shipping. A product development team could have representatives from marketing, engineering, manufacturing, customer support, documentation and may even include an internal/external customer representative to ensure the team is sensitive to customer needs, or a key supplier representative that is vital to success.

Very often, some, or even all, of the team members have not worked together before. Departments tend to stereotype each other which affects team member thinking. Some departments may be at odds with each other, which further stresses the team.

Here are some of the issues that we need to be sensitive to when working with cross-functional teams and some ways to deal with these issues:

Issue: People don't know each other well.

Action: Do a paired interviews exercise to surface values, goals, motivators, personal interests, etc.

Issue: People are nervous about what they are getting into.

Action: Ask for concerns and questions about the project and get involved with them to come up with ways to resolve or partially deal with the issues at hand.

Issue: People have different thoughts about what a team is.

Action: Have them share expectations for the team with other team members and the team sponsor.

Issue: People have different working norms.

Action: Develop and use ground rules.

Issue: People have different priorities.

Action: Align teams around a superceding such as customer satisfaction or for the good of the company.

Issue: There is no precedence on who does what.

Action: Do a roles and responsibilities negotiation exercise and develop a responsibility matrix. It may happen that ownership has not been assigned because nobody wants to get stuck with a certain task. In such a case it may work best to get together as a group and layout responsibilities. If it is a group decision, it often makes the task assignments more bearable.

Issue: It is difficult to come to consensus on mission-critical decisions.

Action: Post all ideas on a flip chart and then have the group identify the pro's and con's of each idea. This is an effective brainstorming approach that can lead to some very effective ideas.

Issue: Some departments or members have more authority/respect than others do.

Action: Make sure that everyone has a chance to be heard and that all opinions are important. Be sure to communicate and demonstrate that everyone involved has an equal opportunity to be heard.

Make sure that the project sponsor and other high-level people involved with the project demonstrate this in their actions as well.

Issue: People are worried about being caught between their boss and team leader.

Action: Get their buy-in and their boss's buy-in on the amount of time in meetings and project work.

Issue: People sometimes feel they are working on something not related to their work.

Action: Ask them to identify what they and their department expect to get out of the implementation.

Issue: He or she would rather be doing their own functional work.

Action: Try to make all meetings fun and productive so they come away with a feeling of satisfaction and accomplishment.

Issue: He or she is feeling overwhelmed with project work in addition to department work.

Action: Get their manager to assign someone to fill in, answer priority e-mails, and phone calls while in team meetings.

Issue: It is easy to leave out people and groups who need to be involved in identifying and evaluating alternative solutions.

Action: Do a stakeholder analysis and identify concerns for each stakeholder and develop buy-in strategies.

Setting up Your Teams

Here are some additional guidelines and pointers to consider as you group into teams and begin on your VISUAL implementation.

Team Members

- ☐ Ensure all key functions are represented on the team from the start. A key function is any group that is needed to design and implement the change or is affected by it.
- ☐ Limit the team to no more than ten members. If more people are needed for input, make them consultants to the team.
- ☐ If a team member is needed for his/her technical input but is not comfortable or effective in a team setting, make this person a consultant to the team.

First Team Meetings

- ☐ Have team get clear on project mission and negotiate changes.
- ☐ Develop team ground rules such as:
 - ☐ start and end on time
 - ☐ no side conversations
 - ☐ points are to be made briefly - if a few continue to dominate meetings use a timer to impose limits. It's often effective to establish a policy whereby each person has the opportunity to speak during one cycle of the egg timer
 - ☐ if you can't do something, alert the team and come up with a solution
- ☐ Clarify expectations each team member has of other team members, the team, their manager, and the executive sponsor.
- ☐ Decide which team decisions will be consensus based and which won't be.
- ☐ Focus on an superceding goal (e.g., customer satisfaction, company survival.)
- ☐ Create a project mission or problem statement that all team members understand and support.
- ☐ Begin use of Project Team Dashboard (A graphic set of indicators that team members can refer to see relative progress toward specific goals.)

- ☐ Use a meeting effectiveness check at the end of every team meeting
- ☐ Discuss what worked well
- ☐ What should we do differently next time and how will we do it?
- ☐ Expect first meetings to be inefficient and take longer

Building Team Self-Reliance

Start each meeting with a review of the ground rules and a last meeting effectiveness check:

- ☐ Do just-when-needed education.
- ☐ Team development cycle.
- ☐ Team roles and responsibilities.
- ☐ Consensus decision making.
- ☐ Conflict management.
- ☐ Importance of accountability.
- ☐ Meeting management skills.
- ☐ Idea generation techniques.
- ☐ Prioritizing/voting techniques.
- ☐ Problem solving skills.
- ☐ Action planning.
- ☐ Confront team ground rule violations right away.
- ☐ Don't allow bad habits to get established.
- ☐ Insist on accountability and problem solving.
- ☐ Ensure team consensus for "mission critical" decisions.
- ☐ Surface and discuss the "undiscussables" and hidden agendas.
- ☐ Ensure team decisions, open issues, and action items are documented (bulleted format).

- ☐ Have the team leader and team sponsor meet regularly - go to the first 2-3 meetings.
- ☐ Utilize the executive sponsor to overcome barriers and resource gaps.
- ☐ Celebrate doing things right as well as team work improvements and achieving progress milestones.

In closing, let us sum up all of these observations into three main points. These three points are what we believe to be the most crucial messages we can impress upon you.

- ☐ Be sensitive to the unique issues cross-functional teams have
- ☐ Invest in strong team start ups
- ☐ Build the team's self-sufficiency

Technical Skills required:

- ☐ Users
- ☐ Tech staff
- ☐ Database Administrator (DBA)
- ☐ Networking

Team Structure

Typically, three working teams are required to cover the diverse areas in implementing VISUAL Manufacturing. These teams include:

- ☐ Manufacturing team
- ☐ Financial team
- ☐ System team

In addition, a Core Team is usually created to coordinate the efforts of the three working teams.

Core Team

This team will be comprised of the individuals whose time will be almost entirely, if not totally, dedicated to this project. These people will be your key resources for completing the tasks associated with the project. Typically one or more representatives of each “working” team are appointed to the core team. The core team is responsible for keeping the overall project within scope and to balance the needs of the various functional departments.

Manufacturing Team

This team should have at least one person from every area that deals with materials and production starting with customer requirements. The Manufacturing Team is defined by more than just the actual production of product. The Manufacturing Team includes:

- ☐ Sales
- ☐ Purchasing
- ☐ Receiving
- ☐ Inventory Control
- ☐ Production
- ☐ Scheduling
- ☐ Engineering
- ☐ Shipping
- ☐ Service

The Manufacturing Team may indeed be your largest team. It is important to keep ownership with the people who perform the tasks. In fact, in larger companies it may be desirable to break the Manufacturing Team into smaller functional teams for each of the areas listed above. These smaller teams then work as a subset of the larger more generally focuses Manufacturing Team.

Financial Team

This team deals with all the financial implications of bringing up VISUAL Manufacturing including Payroll, Human Resources, and Cost Accounting. Since costing is very tightly integrated into the various manufacturing components, a well thought out and thorough Financial Team is essential. It is much easier to understand the intricacies of cost accounting before data starts to flow through manufacturing. The key to good financial operations is to cross train both manufacturing and financial team members simultaneously on how costs flow through the system. The financial team may only consist of one person in smaller companies.

System Team

The System Team needs to include members beyond basic computer support. Additional needs to be addressed are database management, documentation coordination, and custom report writing.

Work Styles

Work styles are personal characteristics that are work-related. Inherently we all have a style of our very own. We need to pay attention to these personal differences and understand that each individual person may handle the same situation in a different way.

When a group of individuals forms a team in the work place, the effects of style differences are typically intensified. Teams operate dynamically and are usually formed on the basis of professional or technical skill sets. Usually little attention is paid to the dynamics of the group itself.

If we pay attention to these differences, we may be able to answer questions such as “Why is it so hard to work well with some people?” More importantly, what can you do about it? How can you significantly improve difficult work relationships?

Style Management

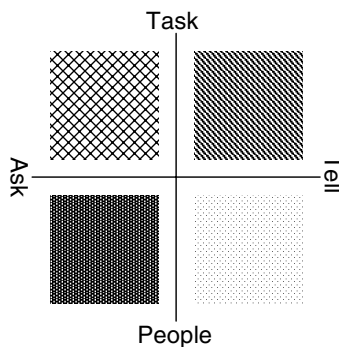
Working with a pair of simple measurements we can gain a better understanding of personal styles. We can then use this knowledge to tailor how we interact with others so that as a whole you and the team are more effective.

The first measurement deals with people's assertiveness. We can segregate people who are more assertive from those that are less assertive. In a similar fashion, we can separate people who respond to people issues from those who respond to task issues. You may wish to call these individuals "people oriented" or "task oriented."

If we set these measurements up on a pair of axis, we can use them to better fit people's personalities into a matrix such as the one shown below.

There are many different programs that provide a similar message. We won't go into too much detail dealing with different types of people.

The main point that we want to stress here is that people work in different ways. They also express their feelings and ideas in different ways.



People who are in the People and Ask quadrant usually need more assurance and coaxing to share their ideas. These people must be assured they are part of the process and that their input is truly valued. People who are in the Task and Tell quadrant usually have no problem sharing their views. However, they may need some help understanding issues that involve people's feelings. They are much more directed by the tasks that need to be completed. These folks are generally good in leadership roles.

With so much variety in the workplace, it's no wonder people related problems exist. Yet it is possible to overcome personality conflicts by understanding other people's differences instead of merely reacting to them.

You need to understand how your preferred style of working comes across to other people. It is also very helpful if you can read people's behaviors so you'll know the best way to work with them. Adjust your behavior in small ways will dramatically improve results with different working styles.

Being flexible enough to act differently to similar situations based on the personalities/characters of the people involved is crucial.

We are creatures of habit. However, we can work with others more effectively by recognizing their comfort zone and making changes in our own behavior that meet their needs and expectations.

Conflict Resolution

Any project manager is sure to have a story or two about how interpersonal conflict affected the outcome of a project they managed. The consequences of failing to deal with these problems in an appropriate and timely fashion can be as harmful to your project as faulty budgeting or inadequate planning. Allow us offer some insight to help you during your VISUAL implementation.

Here are five ways to deal with conflict situations:

- ☐ Remove yourself from the disagreement.
- ☐ Ignore the disagreement to try and smooth over the conflict.
- ☐ Exert power to force the issue to the surface.
- ☐ Compromise to bring at least some level of satisfaction to everyone involved.
- ☐ Confront the problem directly to work through the disagreement.

Even though some of these options sound like ways to ignore the conflict more than resolve the conflict, each approach can be appropriate in certain cases.

If an argument is heated, it may be best to walk away until the emotion can be taken out of the issue or try to ignore and move past the conflict before it gets blown completely out of proportion. Neither of these approaches solves the conflict. The conflict is likely to arise again.

In a situation where exerting power may be appropriate, make sure that you have the background to back up the use of power. You need to have experience and knowledge in the area of the conflict to be taken seriously. If not, you are adding to

the problem. In a situation where you move towards compromise, both sides may end up feeling like they lost more than they gained. The result may not always be desirable for the project. The only approach that is useful for solving the underlying conflict is the fifth one we mentioned above.

Project managers can confront the issue by raising confrontational questions to demonstrate that you are interested and attentive to those involved and the project itself.

An important thing to note is that problem situations are to be resolved in an orderly and timely manner. The severity of the problem will dictate the persons responsible for resolving and the time period allowed for resolution. If no decision is made about the conflict, the project manager will proceed forward at risk. Here are some general guidelines relating to who should solve what sort of conflicts and in what sort of time frame.

Project Manager

Resolve conflicts that relate to the functional aspects of VISUAL within the core project team. Resolves conflict within three business days.

Project Manager's Manager

Resolves conflicts within the team concerning new policies and procedures that must be implemented. This person consults with the senior area manager to resolve difficult problems. Resolves conflict within three business days.

Key User

Resolves conflicts among the development team(s) and the primary users in determining the priority of requirements when resources are limited. Resolves conflict within seven business days.

System Owner

Resolves conflicts among the development team(s), key user and project manager in situations where differences about project scope, schedule or funding arise. Resolves conflict within seven business days.

The Mediation Session

If you have a conflict that you cannot resolve yourself, mediation may be the answer. Mediation helps you and your disputants resolve differences skillfully and effectively. Mediation is basically the use of an unbiased third party to get in the middle of the conflict and help all parties come to a resolution that everyone realizes is in the best interest of the project.

The Mediation Session:

- ☐ Begins by giving all parties the opportunity to tell about their sides of the conflict
- ☐ Continues by helping all parties to reach an acceptable solution
- ☐ Ends with a written agreement describing the solution you have reached

Customization vs. Re-engineering

You are sure to grapple with decisions regarding whether you should customize VISUAL or change your business processes at some point during your implementation. Let us offer some guidelines that will help you make sure you take all key considerations into account.

Customization

Customization can seem like an attractive option. This is especially true if you have a large budget and are short on time. Customizing the software can be an effective way to fast-track your implementation.

The pitfall of this mentality will come into play whenever you have to upgrade the affected module of VISUAL. There are extensive maintenance costs to consider when deciding to customize. Be sure and weigh your decision carefully.

The following are some thoughts we offer to help you with customization decisions:

- ☐ Management must set a clear customization policy early on in the implementation cycle
- ☐ Customization can be very effective in creating an advantage over competition when used diligently
- ☐ Avoid customization for things that have a work-around and that add little value or competitive advantage

- ☐ Easy to add with new open technologies...sometimes too easy since it can hid the long term costs of maintenance
- ☐ Can delay and add cost to upgrading to future releases
- ☐ Realize that usually 90% of business processes are common to all businesses...try to use the software as written

Re-engineering

Let's reiterate the last point made in the section above: "Realize that usually 90% of business processes are common to all businesses...try to use the software as written." Any time you encounter a point where VISUAL does not support your business processes we encourage you to examine your processes in greater detail.

Take the time to see if changing your processes to work effectively with VISUAL does, in fact, make your processes more efficient.

This is very hard for many companies because we would all like to believe that our processes are already efficient and as streamlined as they can be. However I think we are all aware that there are only a select few organizations that can be considered the best in their class.

For the rest of us, the time at which we implement a new system as significant as VISUAL is a wonderful opportunity to examine our processes and increase our overall efficiency both on the shop floor and off.

The following are some common reasons why reengineering efforts are unsuccessful:

- ☐ Trying to fix a process instead of changing it.
- ☐ Not focusing on the **business** process.
- ☐ Ignoring everything except the process design.
- ☐ Neglecting people's values and beliefs.
- ☐ Being willing to settle for minor results.
- ☐ Quitting too early.
- ☐ Placing constraints on the definition of the problem and the scope of the reengineering process

- ☐ Trying to make reengineering happen from the bottom up.
- ☐ Assigning someone who does not understand reengineering to lead the effort.

It is vital to remember that implementation is as important as design. Neglecting the human element is a design for poor implementation.

You may have successfully examined a process and designed a more effective and efficient process. However, unless you can fully implement the designed solution your gains are likely to be minimal.

Resource Utilization

If resources are over-committed, it is the responsibility of the project manager to reschedule tasks, re-prioritize work, or work to get additional resources. This is when the ability to think quickly and creatively is vital. Allow us to offer two activities that can help you achieve better utilization from your resources. Next we will discuss resource leveling and resource loading.

Resource Leveling

The goal of resource leveling is to balance the utilization of a given resource throughout the project. Resource requirements can fluctuate wildly, especially close to milestones and deadlines. Leveling resources attempts to take the “crunch time” out of project plans and create a stable and consistent level of work for the team members. Taking this fluctuation out of the project helps the team members build momentum and stay on track.

Resource Loading

The goal of resource loading is to schedule project activities so that the utilization of a particular resource does not exceed a specified maximum. If a resource is only available for 40 hrs a week, don’t schedule them for 60 hours in a week. All resource assignments and schedules are meaningless if you have your resources committed to more time than they can realistically provide. In fact you may want to schedule some of your resources slightly below their capacity.

As a majority of the readers are bound to work in the manufacturing arena, this may be a concept with which many of you already identify.

The management of your VISUAL implementation, at least on the surface, is very similar to the management of a shop floor. The goal is to maximize throughput while maintaining an appropriate level of quality and managing the cost of your operations.

PERT and Gantt charts are great tools to help achieve meaningful resource assignments.

Only Estimate What You Know

When preparing budget and schedule estimates, you have to be careful not to try and estimate everything. If you do, you may find that people have set their expectations at a level that you will not be able to meet.

Don't overextend yourself by trying to solidify things you don't have your hands around yet.

If for some reason you have to develop estimates for tasks/budget items that you can't accurately estimate, add some sort of a footnote referencing the fact that the figures may not be accurate and are subject to change based on the collection of more data.

This is especially true if you are preparing cost estimates to compare using internal resources versus hiring outside contract help. Poorly generated estimates can greatly impact the project.

To minimize escalation from uncertainty, management must strive for the most definitive scope of work and the clearest, most specific project objectives. The clearer the objectives, scope and work definition, the better the requirements definition, and the easier it is to make accurate cost estimates.

Keep Tasks Manageable in Size

The lowest level tasks (the finest level of detail) should consist of those tasks that do **not** constitute multiple responsibilities. Here are some guidelines for what level of detail to go down to. The lowest level tasks can be characterized by:

- ☐ Single action verb
- ☐ Single ownership
- ☐ Single deliverable
- ☐ Small enough to reasonably estimate

Keep in mind that not all tasks have to be broken down to the same level on your project plan. More complex tasks will have a greater decomposition than simple tasks.

Implementation Methodology and Culture

It is important to note that we don't expect every company to implement VISUAL by following the exact same methodology, making decisions based on the exact same options, or even using the same basic approach to structuring the project plan. The reason for this is that no two companies are identical.

We understand that all companies have different priorities and different goals. We don't expect your implementation plan to conform to a standard template. There are bound to be style and cultural issues that will impact your VISUAL implementation that are unique to your organization. The better you are at recognizing these issues before they have a direct impact on your project, the more likely you will be to completing your project on time and on budget.

If you have any outside consultants involved in your implementation, it will be important to let them know about these cultural issues where appropriate. Only be able to react and perform well to the degree that they are well informed and made privy to the things that make your organization unique.

Develop a Budget

The budget allocates cost to your assigned categories (e.g. labor pools, equipment, supplies) over the life of the project.

You can then build spreadsheets, graphs, and other visual representations of the data in your budget to track and report your performance. Building the budget can be done in a three-part process.

1. Use resource-loading charts to determine your labor budget.
2. Use your schedule to spread the cost of your expenses over the life of the project.
3. Track expenses month by month so that you can quickly react to an over budget situation and adjust the schedule in a timely fashion to get back within budget.

Some elements to consider in your estimates are:

- ☐ Direct labor
- ☐ Internal employees
- ☐ Contractors
- ☐ Software
- ☐ Hardware
- ☐ Training
- ☐ Indirect labor
- ☐ Overhead
- ☐ Supplies/materials
- ☐ Recognition/rewards
- ☐ Travel/meals

Track and Manage the Project

There are a variety of things to track during the life of your project. Some of these things are the ones that you think of off the top of your head. They include tasks, resources, and budget. Others, and possibly the most important, include the less tangible measurables such as morale, executive approval and user acceptance.

First, let's talk about the more obvious things to track. For the more tangible aspects of your project (dollars spent, tasks completed, hours worked) you can track and manage the project using the following steps:

1. Set performance standards
2. Collect actuals
3. Compare to estimates
4. Measure variance

5. Determine cause and analyze impact
6. Take corrective action
7. Make revisions to plan

Creating your schedule and budget generally sets the standards. You can then map your actual figures against your estimates and take action as necessary. One thing to consider is that collecting actuals is not as simple as it seems. This is especially true when it comes to task completion and hours worked. Here you are at the mercy of your team members to report their time accurately. Conducting status meetings can be a helpful vehicle to facilitate the completion of time sheets. You will have to be somewhat firm and persistent about time sheets, as people generally don't like to work on them.

Toolkit Forms: *Gantt Chart - IMP-T12-DOC1210.*

Status Reporting

Typically, when we think of status reporting we think of weekly reporting. For most projects, it is the reporting cycle that is most common.

However, depending on who you are reporting details to and what that person's preferences and needs are, you may be reporting on different cycles. Let's offer some different cycles below and when those cycles are most commonly used.

Weekly

The project schedule should be laid out in detail and put in the weekly status reports. This is where actual completions are tracked against what was planned. The project manager will put all line items (activities, tasks, and sub-tasks) of the development stages on the weekly status report with a deliverable date for each.

The project manager will update the status report on a weekly basis to provide the approvers information about recent completions, accomplishments, and effort expended. The project manager will discuss the progress of the VISUAL project each week with the development team, the users, the system owner, and other involved parties. The development team may also meet weekly to discuss internal problems and issues.

In addition to these weekly means of reporting status, the project manager will be available to answer questions about the progress of the application at any point in the development cycle.

Monthly

All of the above information can be summarized and prepared monthly to be distributed to more senior members of the project team or others who have little interaction with the team, but have some reason to keep abreast of project status.

As Required

Project teams will often meet informally as needed throughout the project to coordinate work assignments and plan upcoming work. At these times it is helpful to have a current copy of the project plan to help guide the meeting.

Issues Log

If problems are encountered in the development of the project, they will be reported in a problem/issue Log. This log will consist of a problem description, date the problem was reported, person who reported the problem, person who owns the problem, the resolution, and date the problem was resolved. This log must be maintained by the project planner and used for project status discussions.

Project Execution

Once a project has been defined, the goal is to deliver the design on time and within budget. There are several things that occur, which usually lead to high levels of stress. Things will not always go your way. Given all the opportunities for your project team to encounter problems, we suggest that you do everything you can to foster an environment where people feel willing to contribute. Open communication is usually the most important ingredient for success. As you read this section think about how integral open communication is to each and every one of the following initiatives.

Process Modeling

Modeling your current processes helps you understand your company's processes and the factors that drive the performance of your business. The greatest and most advanced piece of software will not create efficiency or cost savings for you if your processes are inefficient.

The key is to realize and accept that the way you are currently organized may not be the most efficient way to complete your business. By mapping your processes, you can create a visual overview for each of your business processes to see how a particular task fits into the big picture. This visual overview is useful in identifying insufficiencies in process flow.

The Five W's

Traditionally speaking the five W's represent **Who, What, Why, When, Where**.

You will need to think long and hard about your existing processes before you attempt to map them to the VISUAL software. Be honest with yourself as you ask these questions and you may not like what you find at times. However, in the long run you are almost guaranteed to be more successful.

Effective Re-engineering

To often we limit ourselves when we think about redesigning or reengineering our business processes. We do not think outside of the box. If this is the case, we have limited our success before we even start.

While set business processes can promote a business's prosperity, sub-optimal business processes can cause its disintegration. Adherence to sub-optimal business processes can prevent an organization from realizing business opportunities.

For this reason, it is just as important to practice "rule breaking" as it is to perform rule making. This column will focus on the process of conducting facilitated rule-breaking sessions. By conducting sessions where you practice rule breaking as a part of business reengineering efforts business rules that result from such sessions should foster organizational learning, increase corporate IQ, and launch the enterprise into a better future.

Rule Breaking

When you think about it rule breaking is essentially a form of rule making. Through facilitated sessions, you can focus the group's attention on the value, efficiency, and effectiveness of business rules as they relate to the enterprise's business processes.

The key is to balance creativity and factual analysis. These sort of sessions can often be a cultural and financial breakthrough.

The Basics of a Facilitated Rule-Breaking Session

A good rule breaking session is facilitated chaos. Rule breaking has very tight time constraints and must result in explicit deliverables. There are two types of actors in facilitated rule-breaking sessions: the facilitator and the participant.

The facilitator is responsible for helping to create the chaos. This person must expect unpredictability, be open-minded, and able to move quickly from activity to activity. A good facilitator knows that humans learn with different styles, which include visual learning ("I see your point"), auditory learning ("I hear you"), and kinesthetic learning ("I get it").

The facilitator must be able to manipulate the group and the processes to exploit these varying intake modes.

The facilitator should be aware of the "group think" phenomenon - the tendency for a group of people to agree to behave in a certain way because it seems more important to agree than to challenge or question an issue. Group-think is a problem—it stifles seeing alternatives, possibilities, and dangers. It can lead to sub-optimal business decisions. Facilitators must be able to recognize group think and direct the group away from it.

In developing an agenda for rule-breaking sessions, facilitators should focus on the **purpose**, **process**, and **principles** (the three P's) for the session.

The agenda includes a statement of purpose, working models and lists, specific deliverables or products the group must produce, guiding principles for the session, and its rules for governing the group's behavior. Without these basics, the group will fail. The deliverables, whether tangible or intangible, represent the foundation for the new business rules. They will be of the group's explicit consensus, meaning that each member not only can live with the business rules, but will openly support them.

Facilitated sessions can result in powerful momentum. Do not pursue facilitated sessions if your business' culture will destroy this momentum. This will damage enterprise morale. Likewise, if the sponsor is not powerful enough in the organization to allow the rule making or breaking to happen, do not proceed. Also, don't conduct the session if the right people can't attend. A single person's absence can negatively impact the course of events during a session. This person might be a key business-knowledgeable participant, decision-maker, or "old timer" with a good understanding of existing rules, or inventive thinker whose energy and ideas will spark creative thinking. Everyone's input is highly valuable.

Before VISUAL Model

The Before VISUAL Model documents the processes that make up the information flow throughout your business. These processes should include all computers and paper based systems that are currently in place. It is important to document them as they presently are without the temptation to improve upon them or make them as you think they should be. Honesty, clarity, and completeness are very important. It is not necessary to spend a great deal of time making the models look nice. It is perfectly acceptable to use thumbnail sketches, existing procedures, and simple marked up notes. The goal is not to have a fully

polished set of procedures but rather to have comprehensive documentation of all business needs. These needs are then used to ensure that the revised business model (with VISUAL) contains every business requirement. Be sure to include all aspects of how information flows through your organization no matter how seemingly trivial.

This should also include the process steps that you do not anticipate automating with VISUAL so that continuing provisions are considered in the revised model.

It is tempting to just skip over this modeling step since it seems like everyone already knows the current processes. Avoid this temptation! A clear and accurate understanding of all aspects of current information flow will greatly improve your ability to have a successful implementation that has not left out critical processes.

Use the tabular worksheet Current Business Processes to list each of the processes in your business. Each of these lines is a Scenario and when taken together represent your entire business. You may choose to list them in a hierarchical format based on business area (e.g. Purchasing, Invoicing), or simply create a long list of every process that comes to mind.

For each line on this worksheet use a separate Current Business Process worksheet to document the specific process.

Remember that this entire model is a stepping stone to developing a comprehensive post-implementation process model. It is more important to capture all the details then it is to be neat and organized.

Toolkit Forms: *Current Business Practices - IMP-T5-FORM510 and Current Business Model - IMP-T5-FORM512.*

With VISUAL Model

This model documents the way you intend to operate your business after going live with VISUAL Manufacturing. After completing VISUAL training, you will be ready to begin the process of mapping the Revised Business Model into this model space. You may choose to operate in much the same way as you presently do or you may decide to undertake significant reengineering. In either event, this model is the roadmap for how you intend to use VISUAL Manufacturing. A good starting place is to lay the user documentation and/or online help down next to your Current Business Model. From these you should be able to write or flowchart a process that you would like to see implemented.

Use the tabular Revised Business Processes worksheet to list all of your business processes. Since this is the beginning of documents that will live with your VISUAL implementation it is generally a good idea to organize the scenarios by business function. For example, you may wish to list all purchasing processes under a general Purchasing heading.

While this is not required, it will make for a clearer model and simplify migrating the model into Standard Operating Procedures later on.

Toolkit Forms: Revised Business Practices - IMP-T9-FORM910 and Revised Business Model - IMP-T9-FORM912.

Customizing vs. Re-engineering

Let us follow up on the discussion we offered on this topic in the Implementation Planning section. If we assume you have begun the execution stage of your implementation, you have most likely already conquered the arduous task of what to customize and what to reengineer. To that end, let us offer some things to consider for implementing customizations.

Keep a Baseline Database

You need to maintain a database that is completely void of customizations. If you ever experience a situation where data is not flowing as expected (i.e. a bug), you will want to have an environment where you can test the same procedure where you are sure that a customization is not impacting your results. This database does not need to be as big as your live database but make sure everything is setup the same way.

Change Controls

You need a method about how you introduce your customizations into your production environment. Be sure and test them from a technical perspective as well as a functional perspective prior to introducing them to your live database environment. This implies the need for a third database environment that is similar to production and has all of the customizations that exist in your live production database.

Business Considerations

There are several key decisions that will profoundly determine the manner in which VISUAL Manufacturing will operate and provide useful information to your organization. Since there are numerous ways to structure data in the system and each business is unique, the goal should be to best structure the data to best simulate the way you do business. Listed below are these key areas with discussion of what to consider when making choices.

The best way to fully understand the best technique is to set up several sets of tests data and actually run data through the system and see if you get the results that you desire.

One-time Settings

There are several settings that determine how VISUAL Manufacturing will behave. Since these settings determine how transactions will be permanently stored they cannot be changed once transactions are entered into the system. These one-time settings are critical to establish correctly from the start to avoid re-implementation. These settings are located in both Application Global Maintenance windows (one for Manufacturing and one for Financials.) The configuration worksheets have these critical settings marked with an asterisk. The online help and user documentation contains detailed information on each of the settings.

Costing Method

Either Standard or Actual costing must be selected. While it may seem simple to quickly assume one costing method is appropriate for your business, it is a good idea to spend a little time understanding the advantages and disadvantages of each costing method and the details of how these costing methods are implemented in VISUAL. Below is a brief recap of the two costing options. Be sure to reference the user documentation and online help for extensive explanations of these.

Standard cost behavior:

- ☐ Purchase material at standard with purchase price variances.
- ☐ Manufacturing variances upon receipt from work order.
- ☐ Labor & burden cost charged to the work order at resource standard.
- ☐ Service costs at standard.

Actual cost behavior:

- ☐ Raw materials valued at PO or A/P invoice.
- ☐ Inventory valued at FIFO or purchased to a job.
- ☐ Labor charged at actual employee rate.
- ☐ Burden basis options:
 - ☐ resource rate(s) = causes VISUAL to use the rates in the reported shop resource to compute actual burden
 - ☐ operation rate(s) = causes VISUAL to use the burden rates in the work order operation to compute actual burden
- ☐ Service costs at actual invoice value.

It is important to note that even though you may choose actual costing, many of the benefits of standard costing are still available to you. Variances are displayed on the various costing windows and reports, they just are not carried to the General Ledger.

WIP Costing

The method for calculating WIP value must be selected if the database is set to actual cost. This setting will only have an impact on the manner VISUAL temporarily costs partial receipts/shipments of Work Orders. This setting has no impact on full shipments/receipts. Regardless of the setting, once the Work Order is fully received/shipped the unit cost gets evenly revised.

Projected—Projected cost is equal to the actual cost of the completed work or issued materials, plus the remainder of the work at estimated cost. This value is then prorated as a unit cost for the quantity received/shipped if it is less than the Work Order quantity.

Actual—When shipping/receiving a quantity less than the Work Order header, all Work Order costs to date will be assigned to the shipment/receipt. Additional partial will use the total of additional cost.

FIFO Method

There are two methods for handling FIFO layers:

By Part—The layers are maintained strictly by part number without regard to warehouse location.

By Part Location—The FIFO layers are maintained for each warehouse location for each part.

Source of Raw Material Cost

This option is only applicable if the system is set to actual costing and determines the source of the cost of raw materials.

Purchase Orders—The cost of inventory is taken directly from the Purchase Order and time of receipt and is not further updated.

Accounts Payable Vouchers—The cost is initially taken from the Purchase Order as an estimate, but it is then updated with the actual cost from the vendors invoice which is matched to the Purchase Order.

While this method is more complex, it is highly preferable for accurate raw material costs. This option is only available if VISUAL Financials is part of the implementation.

Labor Cost Basis

This setting can be changed at any time and only applies when the system is set to standard costing. One of the following must be selected:

Hours Worked—Labor/burden variance is calculated based on actual hours worked vs estimated hours worked.

Quantity Completed—Labor/burden variance is calculated based on actual quantity completed vs estimated quantity completed worked.

Costing Between Levels

This setting determines how intermediate costs are summarized to parent assemblies. One of the following must be selected:

Fold to Material Cost—All cost components (material, labor, burden, and service) are summed together and passed to the next level up as a single material cost.

Keep Separate Costs—Each of the cost components (material, labor, burden, and service) are passed individually to the next level up so as to preserve the total cost in each category throughout the bill structure.

Value Added Tax Support Enabled

This switch enables Value Added Tax support. Note that enabling VAT completely disables the standard sales tax functionality.

General Ledger Reporting Periods

This is the structure of your company's reporting period. One of the following must be selected:

- ☐ Monthly
- ☐ 4-4-5 periods
- ☐ 13 periods
- ☐ Other

Part Numbering

If you have many part numbers in your company, no other topic is more critical and highly opinionated as part numbering.

Most everyone who has ever been involved with a part numbering system has an opinion on how they should be set up. This topic certainly warrants a fair amount of discussion in your organization since part numbers drive a great deal of VISUAL Manufacturing and are not readily changeable.

The first area of consideration is whether to use significant or non-significant numbers. Significant numbers are those that have some embedded meaning. For example 16L-3/32 might mean a 16" left keyed belt with a width of 3/32 of an inch. You commonly see significant numbers in catalogs or for items such as tires, belts, or fittings.

Non-significant numbers are simply numbers that have no meaning, just a sequential number that is incremented and assigned as new parts are created. Historically significant numbers were commonly used to identify the part in a simple way. The problem with this method is that the scheme design is often outgrown and leaves the company no choice but to adopt a modified scheme. This leaves a messy part master with little hope of ever being cleansed. With modern computer systems there are better ways of retrieving parts without relying on just the part number. A well thought out description and a variety of attributes allow easy retrieval and cross-reference of parts. By using attributes, the classification of parts can change from time to time without actually changing the part number. This is highly desirable since you will have the ability to change your part master organization as business requirements change without attempting to change the part number that is tightly tied to many transactions in the system.

Some people choose to implement a hybrid system of part numbering where a small amount of significance is built into the part number followed by a simple counter number.

To aid in making the decision of how much significance to build into your part numbering scheme, advantages and disadvantages for each approach are listed below.

Significant Part Numbers

Advantages:

- ☐ Simple part identification
- ☐ Useful if product line lends itself to simple categorization

Disadvantages:

- ☐ Restrictive if nature of parts change
- ☐ Virtually impossible to change existing numbers
- ☐ Difficult to implement good revision control

Non-Significant Part Numbers

Advantages:

- ☐ New part numbers are easily assigned
- ☐ Very flexible classification

Disadvantages:

- ☐ Must use description or attributes to identify the part
- ☐ Users may resist it if they are use to significant numbering

A second consideration that often needs addressing is whether or not to use existing part numbers or to start over with new numbers. Generally, if you think that your existing numbers are clumsy and need reworking, now is probably a good time to start over. If you have no interest in any historical transactions related to part numbers, then the process is fairly straightforward in assigning new numbers. If you do want historical transactions, these need to be loaded against the corresponding new numbers, or you can load the old part numbers just for history purposes with the intent to eventually delete them from the system. Another consideration with old part numbers is if they are printed in catalogs, sales literature, etc.

In this case you may want to load those part numbers with a description that calls out the new part number. This can help simplify the order entry process.

Costing Method

Below are the four basic industry types with a discussion on which costing method is most generally appropriate.

For custom manufacturers where setting standard costs may not be practical Actual Costing is typically chosen. This type of manufacturing activity has the following characteristics:

- ☐ Very few, very large items being produced.
- ☐ Manufacturing cycle is long.
- ☐ Products are made to a customer's order.
- ☐ Very few, if any, repeat orders.
- ☐ Limited amount of inventory is maintained.

For batch manufacturers costing can be either Actual or Standard. The decision between the two is a bit difficult since you must decide if the knowledge of lot-to-lot cost information is worth the additional work of collecting actual consumption data. If you choose not to collect this lot-to-lot actual information then you will still be able to examine trends in costs by using the variances in Standard Costing.

This type of manufacturing activity has the following characteristics:

- ☐ Bills of material (recipes) that may change based on potency, shelf life and other component characteristics.
- ☐ Lot tracing is often desirable.
- ☐ Many repeat orders.
- ☐ May build directly to customer order and/or to stock.

For continuous manufacturers costing is typically focused on setting standards and monitoring variance from those standards. If the cost of commodity components varies greatly and hedging is desired it may be advantageous to use Actual Costing to track those specific costs. This type of manufacturing activity has the following characteristics:

- ☐ Few parts
- ☐ Consistent bill of material (recipes)
- ☐ Build to stock

Flexible manufacturing can typically use the powerful Actual Costing feature of VISUAL while still having the ability to monitor manufacturing variances. Actual cost will flow to the General Ledger and is used for financial reporting purposes. Comparisons to standard costs can be performed in the Manufacturing Window and in Work Order/Master Cost reports.

Structuring Bills of Materials and Routers

A critical area of VISUAL Manufacturing to understand is the concept of legs in Masters and Work Orders. A leg is like a subassembly but is built using the same Work Order as the main assembly. It can be easily confused with a Phantom, however it is important to understand that it is much different. A Phantom is a stand-alone bill of material and router that is exploded using the then-current components into the parent job. A leg is permanently part of the parent. Changing a Phantom's components will automatically change all instances where a parent calls out the Phantom. In the case of legs each leg would need to be considered and changed independently. VISUAL Manufacturing provides a variety of tools to automatically find and update legs throughout the system.

If you have subassemblies that are mostly the same for each time the parent is build and you do not inventory the subassembly the leg option is very beneficial.

The leg allows you to schedule and build the subassemblies independently, yet maintain everything under one master Work Order.

No receipt of subassemblies into inventory and subsequent issue to the parent job is required. On the other hand if subassemblies are often built to inventory and/or the subassemblies frequently change it may be more beneficial to build separate Masters for each subassembly and issue independent Work Orders for these subassemblies as they are needed. These methods will require the receipt of the subassemblies into inventory and a subsequent issue to the parent Work Order. Since only one master is maintained (as opposed to many copies of the same structure as legs) the maintenance for changes to its structure is simple.

Custom manufacturers typically will want to make full use of legs when structuring their bills of manufacturing. This technique ties the entire structure under one Work Order while still allowing separate costing and scheduling of subassemblies.

Flexible manufacturers typically will **not** want to use legs since subassemblies may be built in large quantities and inventoried independently of final assembly. If frequent changes to subassemblies take place then the common subassemblies bills of manufacturing will simplify the maintenance process.

Units of Measure

The Unit of Measure Maintenance function defines and maintains the different units that can be used in VISUAL to specify material quantities.

You can use different units of measure to specify quantities for: Material Purchases, Material Stocking, and Material Requirements (in work orders or engineering masters). To allow for differences in these units, a conversion factor may also be established. VISUAL will automatically convert as needed, provided the necessary conversions have been defined.

The system first searches for the direct conversion and then uses the reciprocal if that is available. For example, if trying to convert feet to inches, the system will first look for a feet-to-inches conversion, then, if that's not available, will look for inches to feet.

Entities

It is important to understand how VISUAL uses the term Entity. Currently only one entity is supported for interface into Manufacturing. In other words, the basic manufacturing floor information must belong to a designated entity to which the

inventory, WIP, shop resources, etc. will be linked. For this reason entities are typically used for non-operating accounting such as a real estate holding company, a Foreign Sales Corporation, or development division.

Several master files, such as customer and vendor files, as well as transactional data can be linked to entities other than the designated manufacturing entity. Therefore, Customer Orders, Purchase Orders, A/R and A/P invoices and payments, as well as bank accounts and journal entries can belong to any entity within the database. Each entity will produce its own independent financial statements and can be consolidated with other entities. All entities within a single database must use identical chart of accounts and each Entity must set an interface table. If you have multiple divisions that all use manufacturing functionality, then the entity feature will not work for you.

In this case you need to either define divisions in the Chart of Accounts for one entity or implement multiple copies of VISUAL Manufacturing and perform consolidations into a parent entity on one of the installations. Utilities are provided with the standard software to export account activity from one VISUAL installation and import them into another.

Chart of Accounts

A well thought out and organized Chart of Accounts is essential to properly capture financial information in alignment with the way that your company wants its financial information presented. You may find that the reports provided by VISUAL, such as sales and cost of sales analysis by product line to be a good substitution to a complex Chart of Accounts. However the multi-level Chart of Accounts structure of VISUAL allows you to create accounts for the purpose of rolling up multiple account balances. These accounts are referred to as Summary Accounts. One of the wonderful features of the summary accounts is the explode level in the Report Writer. When creating a report with summary accounts, you have the option to drill down upon, and display the information of the accounts that roll up into the summary. In other words, creating one report line with a summary account will save you having to create individual report lines for each of the accounts that roll up into the summary.

VISUAL Financials does not directly support divisions and departments in the sense that an organizational matrix can be established. Instead significant digits and indenture is commonly used to define organizational structure. You may want to use delimiters, such as a period or dash, between the account number and the department/division.

By using a fixed number of digits and delimiters the Chart of Account structure will be clear to users. It also makes report writing much simpler since wildcard characters can be used in defining account numbers. This way as accounts are added to the Chart of Accounts the reports will not need to be modified to include the newly defined accounts.

Because VISUAL uses a free-form account number you can arrange the account number and organizational number in any order or fashion that you want.

The indenting of the Chart of Accounts is very critical to make the financial statements work. VISUAL does not close out income and expense accounts in the traditional sense; it uses account indenture to offset prior year balances.

The indenture should be strictly defined to make the financial statements work from an overall company perspective and not focus on organizational structure. If you want a method to group together accounts for convenience in report writing and online account review then use the Account Group feature in the General Ledger. This feature lets you define any number of account numbers under another account number much like indenture. In this way you can refer to the Account Group as a whole rather than dealing with all of the individual accounts. This is particularly powerful if you anticipate added or reclassifying accounts from time to time. Queries and reports can refer to the group name which can have its constituent accounts changed independently and at any time.

Document Numbering

A couple of general rules in document numbering are to avoid using alpha and numeric mixed together as it can be confusing. If you do choose to use the combination then try to avoid using “look alike” characters such as “O” and “0,” or “I” and “1.” These characters are often confused and can potentially get entered wrong into the system, or users will misread documents and have trouble performing queries.

Most of the documents in VISUAL support automatic numbering. If the document number is left blank, the system will automatically assign a number when the transaction is processed. It is possible to use both automatic numbering and manual numbering since numbers are only automatically assigned when the document number is left blank. In this way some documents can be manually assigned while leaving the remainder for automatic assignment.

If you are using the automatic numbering feature you will want to give some thought to the formatting of these numbers. VISUAL lets you assign specific prefixes and suffixes to a sequential number. You may wish to use these to identify the year or division (if you are using multiple VISUAL installations.) If you do use the year or fiscal period be sure to include that as part of your Standard Operating Procedures so that you will not forget to reset these.

Another useful thing to do is identify each type of document with a significant prefix. For example Purchase Orders as “PO-“, or Customer Orders as “CO-“. While this is additional typing and breaks the general rule of not mixing alpha and numeric characters, the benefit is that you will easily be able to identify what type of document something is just from the prefix. It can become overwhelming differentiating the various documents since there are so many used in VISUAL and they often look alike. The sequential number portion is generally used as a simple “counter” and has no significance. There is a wide variety of ways to look up and cross-reference documents in the system without resorting to using significant numbering. Another consideration is the number of digits. A reasonable number here is important. You don’t need a ten digit number if you only plan on processing a few hundred or thousand documents. Remember five digits gives you 100,000 unique document numbers. Usually five or six digits suffice for most installations. On the other hand it is important not too start with too few either. If you start with three digits and then exceed its capacity of 1,000 unique documents you will need to increase the number of digits.

The inconsistent number of digits as document numbers will make retrieving, sorting, and report-writing much more difficult. The last consideration is leading zeros. Try to avoid them as much as possible.

People tend to not enter leading zeros thinking they are not part of the number and then you will end up with a variable number of digits and inconsistent query results. You are far better off starting with a sequential number like 10001 rather than 00001.

General Ledger Interface Accounts

When setting up the financials a key area to get right the first time is the General Ledger Account Interface. This series of account numbers tells the system where to post various activity and defines many defaults that are used for posting in the event that an account number is not explicitly defined when the transaction is created. It is tempting to assign the most commonly used account number as the default.

For example you may have five inventory account numbers. A default inventory account must be defined to be used in the event that an account number is not assigned at the time when a new part number is entered into the system. The temptation is to make the default the most commonly used inventory account number. The problem with this is that it may be months before you notice that the transactions associated with that part are mis-posted if a different account number should have been used. You then have a significant amount of cleaning up to do. A better approach is to define a series of Suspense Accounts that are only posted to in the event that someone did not set up information correctly in the system. For example you may have the original six inventory accounts plus one more called "Inventory Suspense." Use the Inventory Suspense account for the default. In this way if someone sets up a new part number and neglects to define an account number (or indirectly through a Product Code) then transactional activity will post to Inventory Suspense. This will stick out and can be readily corrected. You can even create a simple report that contains all Suspense Accounts.

That way if your Balance Sheet does not balance at the end of the month you can run the Suspense Account Report and find all improperly posted transactions.

Even better yet, you can run this report throughout the month to quickly identify the source of the problem and correct the user's behavior so that constant improvement is achieved.

Customized Reports

One of the more useful features of VISUAL is the ability to customize reports. Reports can be customized for all users, specific users, and specific entities. Each of the custom reports is contained in corresponding *.qrp file either on the server or on the client workstation. While you are able to simply modify the standard report file, it is very desirable to leave the original report definitions in place and use the report override feature.

The report override feature allows you to place all custom report definitions in a separate folder and map the software to find the appropriate report based on the entity and user. Be sure to use this feature from the very start of your implementation. If you modify the original *.qrp files they are likely to get over-written by software patches and upgrades. In addition, when troubleshooting custom report problems it is very helpful to temporarily remove the override to see how the standard report functions.

Data Loading and Conversion

To aid in the discussion of the various data that need to be loaded into VISUAL, we have classified them into three categories: static, dynamic, and historical. Static data are the master records required to run the system. They include things like Parts, Customers, Product Codes, and Bills of Material. Dynamic data are the transactional records used in everyday use of the system. Examples include Purchase Orders, Work Orders, Shippers, and Journal Entries. Historical data really is just old static and/or dynamic data but we classify it separately since it is not necessarily required to start up the system. Historical data may be loaded after going live, may only be summarized, or may continue to exist on your legacy system.

Note: For more detailed information while you are reading this section, refer to VISUAL Manufacturing's user documentation.

This section focuses on the techniques of getting these data into VISUAL Manufacturing.

Technique

Essentially there are two ways to get data into VISUAL Manufacturing: manual entry and importing. Most implementations use some combination of these two depending on the volume and complexity of the data involved. Other considerations include how clean the source data is, how accessible it is, and what types of skills are available among your team members. The Gantt Chart specifically lists each data set with three phases. Phase one is to acquire the data. This may mean to export it out of the old system or print it out or to find the person who has the knowledge. The second phase is to do the actual loading. This is typically done by data entry or importing. It may be necessary to do a combination of these two in some cases. The third phase is to verify the data against the known source. This can be the original source or simply spot checked by a knowledgeable person. In any event, effort should be taken to divide these three phases among different people so that crosschecking can take place.

Each data loading task of the Gantt Chart has underscores in it. These underscores should be replaced with the specific technique. For example, "Obtain Chart of Accounts from Legacy Accounting System", "Load Chart of Accounts by Importing", and "Verify Chart of Accounts using Legacy Printouts".

Static Data

Listed below are the major static data that reside in VISUAL Manufacturing. They are presented in the order that you would typically load static data so that underlying information is populated for use by higher level data.

Manufacturing Global Information

From the main VMFG window: Admin\Application Global Maintenance

Simple lists of static data that are common to more than one functional area are maintained in *Application Global Maintenance*.

Standard Industry Codes

From the Application Global Maintenance window: Maintain\SIC Table...

Standard Industrial Classification codes classify various companies by the products they produce. You can enter and delete SIC codes from the SIC Table.

Alternate Industry Codes

From the Application Global Maintenance window: Maintain\AIC Table...

You can use AIC codes (Alternative Industrial Codes) as an alternative to SIC code. You can enter and delete AIC codes from the AIC Table.

Ship Via's

From the Application Global Maintenance window: Ship Via Table...

Use the Ship Via Table to enter or delete Ship Via codes. Ship Via codes represent the various methods you may choose to ship product to your customers.

Territories

From the Application Global Maintenance window: Territory Table...

Use the Territory table to enter or delete Territory codes. Territory codes represent the various geographical regions in which your company conducts business.

Free On Board

From the Application Global Maintenance window: FOB Table...

FOB (Free On Board) codes determine at what point in the shipping process the customer must take responsibility for the shipping fees for the goods your company is shipping. Use the FOB Point Table dialog box to enter or delete FOB codes.

Commodity Codes

From the Application Global Maintenance window: Maintain\Commodity Table...

You can use commodity codes to define the class of materials used by your company. Use the Commodity Code Table to enter or delete commodity codes.

RMA Reasons

From the Application Global Maintenance window: Maintain\RMA Reason Table...

A Return Material Authorization (RMA) is a document that controls the return of some part or parts previously sold and shipped to a customer. You can use RMA Reason Codes to specify why a customer is returning a part.

States and Provinces

From the Application Global Maintenance window: States and Provinces...

The names of all 50 states and some territories of the U.S.A. appear by default. You can add or delete states and provinces from the default list.

Packaging Types

From the Application Global Maintenance window: Maintain\Packaging Types...

Packaging codes are user-defined codes that define the types of packaging to use for the specific parts to which they are assigned.

National Motor Freight Codes

From the Application Global Maintenance window: Maintain\National Motor Freight Codes...

Enter and maintain National Motor Freight Codes here.

Carriers

From the Application Global Maintenance window: Maintain\Carriers...

Here you can enter and maintain commercial transport carriers.

Service Charge Defaults

From the Application Global Maintenance window: Maintain\Service Charge Defaults...

Setup the service charges your company may charge here.

Export Formats

From the Application Global Maintenance window: Maintain\Export Formats...

Electronic payment and withholding format information for exporting data is entered and maintained here.

Customer Order Acknowledgement Codes

From the Application Global Maintenance window: Maintain\CO Acknowledgement Codes...

When customers send orders to their suppliers electronically, they often require a return document verifying the receipt and acceptance of the order. In Electronic Data Interchange (EDI), this document is called the Order Acknowledgement, typically referred to as the 855 X12 Transaction or the Purchase Order Response Message in EDIFACT.

Financial Global Information

Ledger\Application Global Maintenance

Common information for the financial applications is entered and maintained here.

Entity

From the Ledger Application Global Maintenance window: Maintain\Entity...

You may want to set up more than one financial entity. You can keep separate financial information for different entities in the same database for Accounts Payable, Accounts Receivable, and the General Ledger. Due to the complexity of keeping track of multiple entities, you should only create another entity when maintaining distinct financial records.

Financial Calendar

From the Ledger Application Global Maintenance window: Maintain\Calendar...

After you define the General Ledger reporting periods, set the fiscal calendar and accounting periods for your company using the Financial Calendar Maintenance dialog box from the Ledger Application Global Maintenance window. Review the calendar and plan carefully before entering data. Use the automatic date generation feature to create a calendar for a particular fiscal year. Once the calendar is completed you can alter the following fields as required: first day, last day, and status.

Chart of Accounts

From the Accounting window: Info\Chart of Accounts (indented) or Info\Chart of Accounts (next level)

Your Chart of Accounts is entered and maintained in the system by using *Accounting Window*. You should design the structure of your Chart of Accounts before you start adding any accounts or entering account information. The Chart of Account design should consist of the accounts and the Account ID's the chart will contain as well as the relationship between the accounts. You create relationships from the top of the hierarchy down; use the summary level account to specify the accounts that are subordinate to it, within that account hierarchy.

After you have designed the Chart of Accounts and the Indented Chart of Accounts, you can use the Accounting Window to add the posting and summary level accounts.

Although it is advisable to add all of the accounts and their relationships before you start using the General Ledger, you can add both accounts and relationships at any time. When you add relationships at the top of the account hierarchy, VISUAL automatically summarizes amounts from lower level accounts.

Basic Information

Each account is assigned an Account ID that is used throughout the system. Additional fields to populate here include description, account type, entity, and currency.

Subordinate Accounts

Here you add subordinate accounts to a parent account. The only data required is the Account ID.

Account Groups

Use Account Groups to group accounts together under one identifier, which you can specify when you create reports only with the General Ledger Report Writer. You need to identify the Account group with a unique name and list below it all Account ID's that it is to contain.

Allocations

From the Accounting window: Maintain\Allocations...

Use allocations to automatically create distributions in your General Ledger. Each Allocation is defined by a unique identifier and may be assigned a Group ID to simplify the triggering process. You need to define the triggering frequency, the type of currencies to generate the allocation in, and any user defined variables.

The line detail is used to set up the parameters of this specific allocation. If your allocation is going to be based on a formula enter the Numerator G/L Account ID, Divisor G/L Account ID, and Entity ID. If there are additional percentages you would want to use, you can enter them in one of the three Allocation percent columns. If there is an additional dollar amount, it can be entered in the Additional Amount column.

Once the formula is complete, you then must enter the account to be affected by this allocation in the Debit and Credit G/L Acct ID columns. A Transaction Entity ID must be specified. This will be your default Entity, but you may enter another ID if using multi entity.

General Ledger Consolidation

From the main VMFG window: Ledger\Consolidation

Consolidation is the process of combining financial information to produce financial statement reports. The consolidation process in VISUAL involves two areas: Multi-currency, and the ability to support possible dissimilar Chart of Accounts structure between the subsidiary and parent organization.

The Consolidation Entry window allows subsidiary organizations to generate consolidation entries that you can pass electronically to the parent organization to use in consolidated reporting.

Currency Exchange Rates

From the main VMFG window: Ledger\Currency Exchange Rate Maintenance

The Multi-Currency feature allows you to trade with customers and vendors whose native currency is different than that of your business. This information is entered and maintained in the system by using *Currency Exchange Rate Maintenance*.

Currencies

From the Currency Exchange Maintenance window: Edit\Currency Maintenance

You can define each currency known to the system (including the system's own native currency) using *Currency Exchange Rate Maintenance*. Here you will specify naming conventions, currency format, negative currency format, and symbols to be used.

One of the currencies you define must be marked as the system currency. Set the system currency before using VISUAL. All internal amounts and accounts will appear in this currency. If you use Euro Currency then one of the currencies must be identified as the Euro Currency.

Exchange Rates

You can set exchange rates between the system currency and other currencies. You can enter new rates as often as necessary. The rates are maintained along with the effective date until you choose to delete them.

Bank Accounts

From the main VMFG window: Cash\Bank Account Maintenance

Use *Bank Account Maintenance* to enter and maintain account information about your bank and ledger accounts relative to receivables and payables. In Receivables Cash Application, VISUAL uses bank account information to track Receipts. In Payables, VISUAL uses the same information to track Payments. You can enter an unlimited number of bank accounts in Cash Book.

VISUAL handles multi-currency issues related to the Euro. Companies that deal with European transactions need to transfer currencies between bank accounts. You should setup bank accounts of different currency denominations; this gives you the ability to receive monies in a customer's normal currency as well as the ability to pay vendors in their native currency.

General

Each bank account is assigned a Bank ID that is used throughout the system. Additional fields to populate here include General Ledger account, Entity, and currency.

Address

These fields define the address for the bank.

Payment

VISUAL Manufacturing supports payment receipt and disbursement in the forms of checks. Vendor payments can occur in other forms, particularly now, in electronic form. This involves a direct access method provided by a third party software package that connects to the bank or a clearing house via modem or other on line connection. More often it involves the creation of an export file. VISUAL Manufacturing supports the export file method. In addition it also supports BACS, a United Kingdom bank clearing and electronic funds method.

Fields here include bank account number, account type, branch, transmit user, and the export format for electronic transfers. Export formats are defined in Manufacturing Application Global Maintenance.

Cash Management

From the main VMFG window: Cash\Cash Management Window

The *Cash Management Window* helps you manage cash flow and make critical decisions. The Cash Management Window organizes actual cash flow, predicts cash flow for future periods based on a set of planning assumptions, and provides a forecasting mechanism to build business speculation into the plan. Each plan can be entity-specific, currency-specific, and user definable. It also provides tools to make cash budgets easy to understand.

Global Units of Measure

From the main VMFG window: Inventory\Unit of Measure Maintenance

The *Unit of Measure Maintenance* function defines and maintains the different units that can be used in VISUAL to specify material quantities. You can use different units of measure to specify quantities for material purchases, material stocking, material requirements (in Work Orders or Engineering Masters), and shipping. To

allow for differences in these units, a conversion factor may also be established. VISUAL will automatically convert, as needed, provided the necessary conversions have been defined. The system will first search for the direct conversion and then use the reciprocal if that is available.

Warehouses and Locations

From the main VMFG window: Edit\Location/Parts

Your warehouse and locations (within the warehouse) information is entered and maintained in the system by using *Warehouse Maintenance*. You must create at least one warehouse for the system to use during inventory transaction activities. This should be done during implementation and before you begin entering your parts through Part Maintenance.

Warehouses

These fields define the physical warehouses in your company. Data includes the warehouse description, address, and optional Intrastat information.

Locations

For each warehouse any number of locations can be defined. Each location is defined with a Location ID, a description, and the type of stock that the location represents.

Transit Times

From the Warehouse Maintenance window: Edit\Transit Times...

Use the Transit Times feature to set the number of days it takes to move parts from one warehouse to another. VISUAL uses these times as default values in the Interbranch Transfer Entry window as you enter From Warehouse and To Warehouse combinations.

Shop Calendars

Global Shop Calendars

From the Application Global Maintenance window: Located on the Scheduling tab.

The Weekly Shop Calendar defines standard workday and shift information for your plant. The Global Scheduler uses this information when producing a shop schedule. You can define calendars specific to a particular schedule or individual

shop resource. Where neither of these are defined, the calendar specified here is used. This calendar should therefore define the default work week—exceptions for holidays and different work center schedules are handled in the following section.

Global Calendar Exceptions

From the Application Global Maintenance window: Maintain\Calendar Exceptions...

In some instances, you may need to change a normal shift day. In these cases, you can define an exception for the calendar. For example, use the exception table to define holidays. These exceptions are global in that they apply to all schedules and all shop resources.

Specific Shop Calendars

From the Concurrent Scheduler window: File\Weekly Calendars...

You can define calendars specific to a particular schedule or individual shop resource. Where neither of these is defined, the calendar specified in Application Global Maintenance is used.

Specific Calendar Exceptions

From the Concurrent Scheduler window: File\Calendar Exceptions...

In some instances, you may need to change a normal shift day for a particular schedule or individual shop resource. In these cases, you can define an exception for the calendar. For example, use the exception table to define holidays.

Sales Taxes

From the main VMFG window: Sales\Sales Tax Group Maintenance

Your sales tax information is entered and maintained in the system by using *Sales Tax Group Maintenance*. These taxes are then used during Customer Order Entry. You can also create a Tax Group ID to assign as default Tax ID for a customer. By assigning a default Tax Group ID in Customer Maintenance, you will not need to enter a Tax Group ID each time a customer places a new order. Because the table information is controlled here, you need only input the Tax Group ID when entering a customer order. This ensures that the correct tax is applied to all customer orders.

Basic Information

Each sales tax group is assigned a unique identifier and description.

Line Information

Each line of the sales tax group contains Sales Tax ID, description, and General Ledger account.

Tax Percentages

You enter and maintain the percentage of sales tax here based on effective date. You can also set a ceiling amount for the tax.

Employees

From the main VMFG window: Maintenance\Employee Maintenance

Your employee information is entered and maintained in the system by using *Employee Maintenance*. Accurate employee information is essential for proper job costing. The key decision areas for Employee Maintenance are listed below.

Basic Information

Each employee is assigned an Employee ID that is used throughout the system. While VISUAL Payroll and VISUAL Human Resources use a separate employee master it is generally a good idea to have the Employee ID's identical in each database to allow the importing and exporting of information between the products.

Each master contains the address, department, and pay rate for the employee.

Shift Definition

From the Employee Maintenance window: Edit\Shift Definition...

You can optionally assign a shift to each employee. In order to use this feature you will need to establish a list of shifts to choose from.

Before you can assign Shift IDs, you must first define the Shift IDs. Shift IDs define the break, lunch, and grace periods for a given shift. In defining each shift, you can break down shift schedules by activities that occur during the shift. These activities include allowed clock-in and clock-out grace periods, between-job lag times, and break times. You can also expand this to include specific clock times that shifts begin and end, and breaks occur. For paid breaks and meals an indirect code can be assigned.

Indirect Codes

From the Employee Maintenance window: Edit\Indirect Codes...

Indirect labor codes specify the accounts to which indirect labor (i.e. non-Work Order related) is charged. The employee can then use the bar code associated with the indirect code when charging time to something other than a work order (e.g. training, meetings.)

Earning Codes

From the Employee Maintenance window: Edit\Earning Codes...

You can optionally assign an Earning Code to each employee. These codes are used to direct labor transactions to their respective earning code in VISUAL Payroll. Payroll is then able to handle these transactions in a way specific to that earning code. For example there might be different pay rates, benefit accrual, or different union policies based on an earning code. Earning codes copy to Labor Tickets during creation and can be overridden. They become part of the time and attendance records that are used for subsequent payroll processing.

Vendors

From the main VMFG window: Purchasing\Vendor Maintenance

Your vendor information is entered and maintained in the system by using *Vendor Maintenance*. Most of the information on this window is not required. The more it is complete the better the system will be able to use this data to fill-in information in other parts of the system. If you will be using the Purchasing Window, or if you want to attach preferred vendors to your purchased parts, select Vendor Maintenance and add your vendors to the database using this window. Vendors may be added on the fly if desired by using Vendor Maintenance during normal system operation. The key decision areas for Vendor Maintenance are listed below.

Basic Information

A Vendor ID and Vendor Name initially defines a vendor. The Purchase From fields define the address where Purchase Orders are to be issued. The Remit To address fields are used to define where the payment will be issued for the vendor.

General

The contact fields are used to capture the main contact person and associated data. These data are carried to Purchase Order Entry at the time of vendor selection. This contact information is useful for reference purposes and custom report writing.

The shipment fields include Default Carrier ID, Free On Board, and Ship Via.

These data are carried into Purchase Order Entry where they can be overridden as desired. You can omit this information when populating Vendor Maintenance. However, you will then need to manually enter the information each time a Purchase Order is created.

You can also optionally add an unlimited number of Ship-To addresses that define where the vendor is to ship their product. This is useful if you have multiple locations or you wish to drop ship to customers. These Ship-To addresses are common among all vendors.

Accounting

Vendor terms are defined here and are carried to Purchase Order Entry where they can be overridden as desired. The invoice matching fields are used to define matching tolerances between the actual receipt and the vendor's invoice. This optional feature is useful in setting realistic limits for mismatches in the vouchering process.

Defaults can be optionally defined for the currency which the vendor typically transacts business, Accounts Payable Account ID, and Expense Account ID.

User Defined

Up to 10 user defined fields can be established for each vendor. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Intrastat

If your company requires Intrastat reporting, these fields need to be populated to define transportation information for the vendor.

Payment

If you want to make payment to some vendors electronically then these fields define how the electronic transfer will occur. The default is to issue a paper check.

Purchase Addresses

From the Vendor Maintenance window: Maintain\Purchase Addresses...

You can establish an unlimited number of alternate Purchase From addresses for each vendor. This is useful when you order from more than one physical location of the same vendor and don't want separate vendor definitions for each location. The Ship To address selection is made in Purchase Order Entry.

Remit To Addresses

From the Vendor Maintenance window: Maintain\Remit To Addresses...

You can establish an unlimited number of alternate Remit To addresses for each vendor. This is useful for when you need to make payments to more than one location but want to retain one vendor definition. The Remit To address selection is made in A/P Invoice Entry.

Alternate Contacts

From the Vendor Maintenance window: Miantain\Alternate Contacts...

You can have an unlimited number of alternate contacts associated with each vendor.

Vendor Banks

From the Vendor Maintenance window: Miantain\Vendor Banks...

Use Vendor Maintenance to enter vendor bank information for all vendors. Typically, each vendor has only one vendor bank, but you can add others if necessary.

Withholding Codes

From the Vendor Maintenance window: Maintain\Withholding Codes...

Enter and maintain your vendor withholding codes here by establishing a code, tax percent, General Ledger account, and tax allowance percent.

Shop Resources

From the main VMFG window: Purchasing\Shop Resource Maintenance

Your shop resource information is entered and maintained in the system by using *Shop Resource Maintenance*. A shop resource can be a work center or assembly station, an individual or group of individuals, or a subcontractor employed by your company to perform a manufacturing process. The Shop Resource

Maintenance function provides the means necessary to maintain correct and accurate definitions of your shop resources. This information is vital for proper scheduling and work order costing. The key decision areas for Shop Resource Maintenance are listed below.

Basic Information

A meaningful Resource ID should be chosen since it will be used throughout the system to identify resources. Each resource must be assigned a type that defines the basic behavior of the resource in the system. These types are: Work Center, Individual/Team, Contractor, or Group.

Costs

These fields are used to maintain the cost of the Shop Resource. Cost is maintained in two general categories: labor and burden. If you are using Standard Cost then both cost categories are used to add value to WIP as labor transactions are entered. If you are using Actual Costing then the labor portion is used only for estimates. The labor for the cost is taken from the Employee Master for the specific employee that performed the operation.

You are able to establish the General Ledger accounts where the system will post transactions for the resource. These accounts are the “other side” of the transaction to the WIP account. If these fields are left blank, then the system defaults to the accounts setup in the accounts you specify in Application Global Maintenance for Financials.

Other

These fields are used to establish the manner in which the Global Scheduler will schedule the Shop Resource. Since the shop schedule is only as good as the source data, it is imperative that these data accurately reflect the real-world resource that they represent.

These settings include how many capacity units are available per shift, group exclusivity, and a number of overrides.

Presentation Sequence

From the Shop Resource Maintenance window: Edit\Presentation Sequence...

You can establish the order in which the Shop Resources appear in the Scheduling Window. This is useful if you want key resources to appear first and less critical ones to be displayed toward the bottom. If you do not establish a presentation sequence, then the system places them in the Scheduling Window in alphabetical order.

Shop Views

From the Shop Resource Maintenance window: Edit\Shop Views...

You can create different views to be available while using the Scheduling Window. These different views contain a set of resources you define under a particular View ID. Use Shop Views to define a set of resources you want to view at one time in the Scheduling Window. A resource can belong to many views.

Shop Groups

From the Shop Resource Maintenance window: Edit\Shop Groups...

The Group type of Shop Resource has one or more other Shop Resources associated with it. These resources are all required or can be used alternately with one another. This list of subordinate resources is maintained as a Shop Group. If you are implementing the Group type of Shop Resource, you will need to maintain Shop Groups.

Operation Types

From the Shop Resource Maintenance window: Edit\Operation Types...

Use the Operation Types feature to pre-define all of the attributes of an operation so that you can easily copy information about the operation during operation add or edit in the Manufacturing Window. You can have up-to 99 different Operation Types, each with different attributes. When you change the type of an operation in the Manufacturing Window, the systems asks you whether or not to have the attributes copied. Most fields available for entry for an operation in the Manufacturing Window are available here for entry.

This optional feature greatly reduces the amount of data entry required in the Manufacturing Window and can be implemented at any time.

Services

From the main VMFG window: Purchasing\Outside Service Maintenance

Your outside service information is entered and maintained in the system by using *Service Maintenance*. The Service ID set up here is required when you specify a sub-contractor resource in an operation. Service Maintenance is somewhat analogous to Part Maintenance - a Vendor ID, specifications, and costs are maintained here. The key decision areas for Shop Resource Maintenance are listed below.

Basic Information

A unique Service ID is required to establish a service master. Additional information includes a description, associated Part ID, preferred vendor, and the usage unit of measure.

Costs

These fields are used to maintain the cost of the Service. If you are using Standard Cost then this cost is used to add value to WIP as a service is completed. If you are using Actual Costing, then the cost is only used for estimating purposes. The actual cost comes from the Purchase Order or vendor's invoice (depending on how Purchase Order costing is setup.)

Planning

These fields are used to establish the manner in which the service is planned by the system. Since the planning features of VISUAL are only as good as the source data, it is imperative that these data accurately reflect the real-world resource that they represent.

These settings include how many days the material is to be out to the vendor, the run time and type, and load size.

Units of Measure

From the main VMFG window: Inventory\Unit of Measure Conversion...

A usage unit of measure must be defined for each service. An unlimited number of unit of measure conversions can also be defined for each service. These conversions are specific to the particular service and override any global conversions defined in Unit of Measure Maintenance. These conversions are useful in defining non-generic conversions such as pieces per box, or feet per length.

Vendors Supplying This Service

From the Outside Service Maintenance window: Maintain\Vendors Supplying this Service...

You are able to establish a list of vendors that provide a particular service. By detailing information about each vendor and service, you will save many keystrokes during order processing. Once a vendor is associated with a service you are able to enter a vendor-unique Service ID, and the same cost and planning data as defined above for the generic “vendor-less” service.

Vendors Supplying Service

From the Outside Service Maintenance window: Maintain\Vendor Services Supplied

Since the service is now specific to a vendor you are also able to maintain quotes by quantity. In addition you can specify the unit of measure that you want to use with this vendor.

Customers

From the main VMFG window: Sales\Customer Maintenance

Your customer information is entered and maintained in the system by using *Customer Maintenance*. Most of the information on this window is not required. The more it is complete the better the system will be able to use this data to fill-in information in other parts of the system. Customers can be added on the fly if desired by using Customer Maintenance during normal system operation. The key decision areas for Customer Maintenance are listed below.

Basic Information

A Customer ID and Customer Name initially defines a customer. The Sold To fields define the address where Customer Orders are to be issued.

The Remit To address fields are used to define where the payment will be issued for the vendor. You can establish an unlimited number of alternate Remit To addresses for each vendor. This is useful for when you need to make payments to more than one location but want to retain one vendor definition. The Remit To address selection is made in A/P Invoice Entry.

General

You can assign a Standard Industry Code (SIC) to each customer. These are predefined in Application Global Maintenance for lookup purposes, however freeform text is allowed since the data is not validated by the system.

You can assign an Alternate Industry Code (AIC) to each customer. These are predefined in Application Global Maintenance for lookup purposes. However, freeform text is allowed since the data is not validated by the system.

Each customer can optionally have associated with it one Territory. The Territory is typically the geographic location of the customer, however it can be defined any way you wish. The purpose of the field is for reference and as a sort basis in several reports. The Territory is predefined in Application Global Maintenance for lookup purposes. However, freeform text is allowed since the data is not validated by the system.

Shipment fields include Default Carrier ID, Free On Board (FOB), and Ship Via. These data are carried into Customer Order Entry where they can be overridden as desired. You can omit this information when populating Customer Maintenance. However, you will then need to manually enter the information each time a Customer Order is created.

You also need to indicate whether each customer will accept partial shipments and if they will accept orders early (and how many days.)

These fields are used to capture the main contact person and associated data. These data are carried to Customer Order Entry at the time of customer selection. This contact information is useful for reference purposes and custom report writing.

Credit Limit

These fields define and control the customers credit limit. By using the Credit Status and Credit Limit controls, you can effect how Customer Order Entry and Shipping Entry behaves when a customers credit limit is exceeded.

You are also able to control if a Return Material Authorization (RMA) is required when a customer returns product.

Accounting

Customer terms are defined here and are carried to Customer Order Entry where they can be overridden as desired. You also can associate a Sales Tax Group ID with each customer. This will become the default for Customer Order Entry.

Defaults can be optionally defined for the currency in which the customer typically transacts business and Accounts Receivable Account ID.

User Defined

Up to 10 user defined fields can be established for each customer. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Intrastat

If your company requires Intrastat reporting, these fields need to be populated to define transportation information for the customer.

Shipping Addresses

From the Customer Maintenance window: Maintain\Shipping Addresses...

You can establish an unlimited number of Ship To addresses for each customer. This is useful when you ship to more than one physical location for the same customer and don't want separate customer definitions for each location. The Ship To address selection is made in Customer Order Entry.

Alternate Contacts

From the Customer Maintenance window: Maintain\Alternate Contacts...

You can have an unlimited number of alternate contacts associated with each customer.

Discount Code

From the Customer Maintenance window: Maintain\Discount Codes...

A Discount Code can be assigned to each customer to be used as default for Customer Order Entry. These codes are used to reduce the prices for a particular customer. The discount can be overridden at any time in Customer Order Entry.

You may find this useful for giving high volume, preferred, or wholesale customers discount pricing. In Part Maintenance, you are able to enter matrices defining discounts based on the discount code, customer, and part ID. If you want to use discount codes, then a list of available discount codes needs to be established system wide. Each discount code has a simple percentage discount associated with it.

Sales Representatives

From the Customer Maintenance window: Maintain\Sales Reps...

Customer Maintenance allows you associate a Sales Representative with each customer. While the Sales Representative is an optional field, you will want to use it if you want to generate a sales commission report or generate checks for your sales representatives through Accounts Payable.

If you want to use Sales Reps, then a list of all sales representatives needs to be established. Each Sales Representative has a default commission and is setup to pay as either an employee or vendor. You can optionally share commissions of one sales rep with another on a percentage basis.

Parts

From the main VMFG window: Inventory\Part Maintenance

Your part information is entered and maintained in the system by using *Part Maintenance*. A part is defined as the raw material necessary in the manufacturing process or stocked parts produced from the manufacturing process. A stocked part can be either a finished piece or an intermediate assembly that will be used in another process. The Part Maintenance function provides the means necessary for complete maintenance of all parts. The key decision areas for Part Maintenance are listed below.

Basic Information

A unique part ID is required to establish a part master. If you do not want to use a part number for some items then those items should be entered directly into the appropriate window such as Customer Order Entry or Purchase Order Entry. If you want to predefine non-numbered parts, then you can maintain these based on vendor within Part Maintenance. These parts are not associated with any part master. The part description should be carefully worded to aid in the searching for parts. Additional fields define the drawing number, revision, and file name. Once a file name is associated with the part a button can be pressed to view the associated drawing.

Units of Measure

From the Part Maintenance window: Maintain\Unit of Measure Conversion...

A stocking unit of measure must be defined for each part. An unlimited number of unit of measure conversions can also be defined for each part. These conversions are specific to the particular part and override any global conversions defined in Unit of Measure Maintenance. These conversions are useful in defining non-generic conversions such as pieces per box, or feet per length. When parts are referenced in Customer Order Entry, Manufacturing Window, Purchase Order Entry, and Shipping Entry, a different unit of measure may be used. Conversions are then applied and the quantities changed to reflect the stocking unit of measure for purposes of planning and inventory control.

A different unit of measure can be defined for the parts weight. Used in connection with the unit of measure conversions this feature allows you to define shipment weights in different units than the stocking unit of measure.

Product Codes

From the Part Maintenance window: Maintain\Product Codes...

You can establish a series of product codes to conveniently classify groups of parts. These product codes can be associated with various general ledger accounts. When the product codes are assigned to parts the general ledger accounts are in turn assigned to the parts. This avoids assigning account numbers on an individual basis to each part. An added benefit is that if you choose to change an account number you only need to change it in the product code and not in each part. The product code is carried to Customer Order Entry.

For each account, VISUAL first looks for a part specific account, then for a product code account, then accesses the system default. For any line you leave blank, the lookup “falls through” to the global defaults. Likewise, if you specify inventory general ledger accounts in the accounting section of Part Maintenance, they override any entries you make here. The minimum recommendation is to override all four cost categories (Material, Labor, Burden, and Service) for an account type (Inventory, WIP, COGS) as a group.

Product codes are pre defined and can be chosen throughout the system. Alternatively free-form text can be entered into Product Code fields and is not validated against the pre-defined list.

Commodity Codes

From the Part Maintenance window: Maintain\Commodity Code...

The Commodity Code is a user-defined code for an item. The system uses the Commodity Code for searching and sorting in material planning. The Commodity Code is carried to Customer Order Entry.

Commodity codes are pre defined and can be chosen throughout the system. Alternatively free-form text can be entered into Commodity Code fields and is not validated against the pre-defined list.

Settings

These check boxes are used to classify each part and controls functionality of the part throughout the system. While these settings are not mandatory, they are a good idea to implement at the outset. If these are properly set, then inappropriate fields for the part type are grayed out.

Costing

These fields are used to maintain the cost of the part. Cost is maintained in numerous categories including optional burden application upon receipt and/or upon issuance. If you are using Standard Costing, then a cost is mandatory for each part since this is the basis for inventory valuation. If you are using Actual Costing, it is still a good idea to establish a cost since the system will use it (rather than zero) in the absence of an actual cost. This can happen during estimating and adjusting inventory into stock without providing a cost.

If the part has an associated Engineering Master, then the cost fields can be automatically calculated by imploding all the costs of the part contained in the Engineering Master. This implosion should be done once you are finished initially loading parts and again on an as-needed basis. Since there can be many Engineering Masters for each part, you must specify a default Engineering Master for purposes of cost implosion and planning throughout the system. This default is maintained in the Engineering Master Engineering ID field.

Planning

These fields are used for material planning and scheduling. All parameters are optional but careful consideration should be given to which ones are appropriate for the type of planning that you intend to do. The specific areas effected are material planning, scheduling, MRP, order point, and ABC analysis.

Accounting

These fields associate the part with General Ledger accounts. Enter the General Ledger accounts that you want the system to credit or debit when an inventory transaction is performed with this part. If you do not enter a General Ledger account number in any of these fields, the system uses the default accounts you specify in Application Global Maintenance for Financials.

An alternative to manually assigning account numbers to every part is to use Product Codes. With Product Codes the General Ledger account association is made with the Product Code so that by assigning a Product Code to a part the account numbers are automatically assigned.

Defaults

Several defaults can be established for each part to simplify transactional processing for the part. The defaults show up automatically throughout the system to save data entry time for the user and can be overridden at any time. Defaults can be established for vendor, manufacturer, primary warehouse, auto-issue warehouse, inspection warehouse, and shipping information.

User Defined

Up to 10 user defined fields can be established for each part. The label's for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Piece Tracking

If you are using the Dimensional Inventory feature, these fields are used to specify which dimensions are tracked and at what unit of measure. It is essential that these fields are accurately defined before starting any Dimensional Inventory transactions.

Intrastat

If your company requires Intrastat reporting, these fields need to be populated to define transportation information for the part.

Warehouse Locations

From the Part Maintenance window: Maintain\Warehouse Locations...

A list of all valid warehouse locations must be maintained for each part that is to be stocked. Before you can do this, however, you must define warehouses and locations in Warehouse Maintenance. Various settings are available where you can specify location availability, default, and hold reason. Additional part warehouse locations can be established “on-the-fly” during inventory transaction processing.

For parts that you are not going to stock (i.e. purchase directly to a job) you do not need to create this warehouse location list.

Hold Reasons

From the Part Maintenance window: Maintain\Hold Reasons...

If you intend to have certain warehouse locations dedicated to inventory on hold, you will need to establish a list of Hold Reasons to associate with those locations. A Hold Reason is a code representing a reason that a given part location is not available for issue. For instance, a Hold Reason “Inspect” might indicate that parts are being inspected and therefore have not yet been approved for use on the floor.

Pricing

From the Part Maintenance window: Maintain\Unit Prices by Customer...

From the Part Maintenance window: Maintain\Unit Prices by Discount Code...

From the Part Maintenance window: Maintain\Unit Prices by Market...

A unit price and wholesale unit price can be optionally established for each part. If a price is not established then the system will default to zero.

If your pricing requirements for a particular part are more complex, you may want to implement Unit Prices by Customer or Unit Prices by Discount Codes. The Unit Prices by Customer enables you to set up price-breaks based on quantity for each customer. Additionally, an alternate selling unit of measure can be established for each customer. The Unit Prices by Discount Codes enables you to setup price-breaks based on a discount code such as “Volume Discount,” “Prepaid Order,” or “Spring Sale.” By using these two pricing matrices together you can create complex pricing structures for your parts.

Part Trace Profiles

From the main VMFG window: Inventory\Part Trace Profile Maintenance

A *Trace Profile* defines if a part requires lot or serial number traceability and where this information is required. This is an optional module that is not part of the standard core product.

Basic Information

The Profile ID is the same as the Part ID since only one profile can exist for each part. A label is associated with each profile that specifies the term that is used for grouping the part. Examples of this are Lot Number, and Serial Number.

When to Apply

You need to specify when the user is required to enter trace data for the part. This data can be collected at any or all of receiving, issuing/shipping, adjustments, and labor tickets.

Numbering

You can either automatically or manually assign numbers to lots. If you choose to automatically assign numbers, then a profile needs to be established that defines how the number is to be generated.

Lot Sizes

You need to define the maximum size for each lot. For example you may want to start a new lot number for every ten pieces. If you are implementing serial numbers, this field should be set to one so that each part is assigned a unique identifier. If the field is left blank, then there is no maximum quantity for an individual lot.

Properties Labels

Each time lot information is collected you can specify additional data to be collected unique to that lot. Example for this would include final dimensions, electrical parameters, or grade. These parameters can be classified as either alpha or numeric to ease the process of data extraction and analysis. You are also able to specify whether each property is optional or mandatory.

Engineering and Quote Masters

From the main VMFG window: Eng/Mfg\Manufacturing Window

Each Master contains header information about the overall Master, and multi-level subordinate “cards” that define materials, operations, and outside services. Additionally, message information about the Master is available at both the header and line level.

Header Basic Information

Each Master is assigned a unique identifier that is used throughout the system. This identifier is comprised of five elements: type, base, lot, split, and subordinate (leg). Additional information includes release date, want date, and quantity.

Header General

Fields here include engineered by, engineered date, drawing information, product code, and commodity code.

Header User Defined

Up to ten defined fields can be established for each Master. The label's for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Header General Ledger Accounts

If you are using the VISUAL Financials interface, there are four General Ledger accounts associated with a Master. These are Work in Process accounts for each of the four cost categories: Material, Labor, Burden, and Service. Normally, VISUAL reads these accounts from the Product Code definition, if one is associated with the Part ID, or from the default G/L account interface settings. If you wish to override them for any Work Order produced from this Master, press the G/L accounts, enter each account, or select one by pressing the appropriate button.

Header Variables

These fields are used to define variable dimensions referenced in material requirements. When a Work Order is created from this Master, VISUAL copies the value you specify here as the default. You can then modify the variable values for each new Work Order. This allows you to adjust work order required quantities without modifying individual material requirements.

Master Co-Products

You are able to specify multiple co-products for each Master. Co-product is an additional part produced by a Work Order, in addition to the main part. A Master specifies a part in its header that is considered the main part of the order. This part may or may not be assigned a part number. The co-product list specifies the additional parts that are made with the main part. All co-products must have part numbers. Additional fields here are the breakdown of cost by percentage in each of the categories of material, labor, burden, and service.

Operation Basic Information

Each operation is assigned a unique leg number and sequence number. The leg number is assigned by the system away from user interaction. The sequence number is pre-assigned but can be changed by the user. You should avoid assigning any significance to the sequence number (such as drawing designator) and reserve it strictly for sequencing the operations. Other reference fields exist for cross-reference purposes.

Each operation is defined by a Shop Resource. Shop Resources are maintained in Shop Resource Maintenance and selected in the operation. All data are copied from the respective Shop Resource and can be overridden as required.

If the Shop Resource chosen is a contractor (outside service) then you must also choose a Service ID. Service ID's are maintained in Service Maintenance.

A labor saving feature is to use Operation Types. These types contain specific template configurations for the use of a Shop Resource. Upon selecting a type all or some of the information below is populated depending on how complete the type was originally defined. Operation Types are maintained in Shop Resource Maintenance.

Operation Setup/Run

Fields here include setup hours, run, run type, load size, move hours, minimum move hours.

Operation Other

Fields here include quality test, drawing information, minimum capacity usage, maximum capacity usage, and several scheduling and lot trace control parameters.

Operation Costs

Fields here include the various cost data brought in from the Shop Resource including run, setup, and burden costs.

Operation Advanced

These fields define the Shop Resources that are required concurrently with the main primary Shop Resource. Additional fields define the duration percent and whether each concurrent resource is required at the beginning or end of the operation.

Operation Scrap/Yield

These fields contain scrap and yield percentages with the ability to manually override the calculated values with firm quantities.

Operation Service

If the operation being defined is an outside service, then these fields become available for populating. Data includes vendor, service part, and warehouse.

Operation Quote

If the master is a Quote Master, then these fields become available for populating. Data includes quantity, unit cost, base charge, and minimum charge.

Operation User Defined

Up to ten defined fields can be established for each operation. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Material Basic Information

Each material is assigned a unique leg number and piece number. The leg number is assigned by the system away from user interaction. The piece number is pre-assigned but can be changed by the user. You should avoid assigning any significance to the piece number (such as drawing designator) and reserve it strictly for sequencing the operations. Other reference fields exist for cross-reference purposes.

Each material is defined by a part, however these parts do not have to reside in the part master and can be simply described for one-time use. Parts that are in the master are maintained in Part Maintenance.

Material Quantities

These fields include quantity per, fixed quantity, scrap percentage, dimensions (for use with Work Order variables), reference designator, usage unit of measure, and dimensional inventory parameters.

Material Specifications

A free form field is provided for detailed descriptions and instructions. Also included is effective date, discontinue date, and drawing information.

Material Costs

Fields here include the various cost data brought in from the Part including material, labor, burden, service, and fixed costs.

Material Vendor

Specify a vendor for a non-inventory part. This might be a part on a Quote Master that has yet to be given a master, or a special part for a job that will never be given a master. This provides a vendor to be used when purchasing the material to the job.

Material Planning

Planning lead-time for the part can be entered here to override the standard lead-time defined in the Part Maintenance.

Material User Defined

Up to ten defined fields can be established for each material. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Master Product Configurator Interface

From the main VMFG window: Sales\Configurator Interface Maintenance

From the main VMFG window: Eng/Mfg\Configurator Interface Maintenance

If you are using the optional Master Product Configurator, then you will need to establish an interface table that maps the output of the configurator to specific Engineer Masters within VISUAL. This information is entered and maintained in the system by using *Product Configurator Interface Maintenance*.

VISUAL Messages

From the main VMFG window: Admin\Messages Maintenance

VISUAL Messages creates and maintains records of specific events and sends notification that the event has occurred.

Basic Information

A unique Event ID is required to establish a VISUAL Message. Additional information includes class, action, status, frequency, source document information, sender, recipient, and subject.

Message

The descriptive message for the triggered event is entered and maintained here.

Data

You can enter or paste binary data, pictures, bitmaps, or text here. This information is for reference purposes only.

Query

You need to enter a valid SQL query that you can use as a triggering test here.

Tokens

Here you enter a query that is executed to fill in the placeholder tokens that may have occurred in the descriptive messages.

Dynamic Data

Listed below are the major dynamic data that reside in VISUAL Manufacturing. They are presented in the order that you would typically load dynamic data so that transactions exists for other transactions.

Physical Inventory

From the main VMFG window: Inventory\Physical Inventory Count

Use Physical Inventory Count to manage the process of periodic counts of inventoried parts and resulting reconciliations. You can either enter initial stockroom inventory counts using a physical inventory count or simply enter each transaction using Inventory Transaction Entry.

Initialize Physical Count

From the Physical Inventory Count window: File\Initialize Physical Count

Each physical count is assigned a unique identifier. Additional information includes description, warehouse, tag information, cycle counting parameters, and various options for the physical count process.

Enter Counts

From the Physical Inventory Count window: File\Enter Counts

You enter the date, tag number, part, quantity, location, and optional dimensional inventory parameters here.

Enter Recounts

From the Physical Inventory Count window: File\Enter Recounts

If you need to enter recounts on some or all tags, enter the date, tag number, part, quantity, location, and optional dimensional inventory parameters here.

Review All Counts

From the Physical Inventory Count window: File\Review All Counts

Here you are able to review and edit all counted tags and revise the part, quantity, location, status, and optional dimensional inventory parameters.

Estimates/Quotes

From the main VMFG window: Eng/Mfg\Estimating Window

From the main VMFG window: Eng/Mfg\Manufacturing Window

All estimating and quoting activity is entered and maintained in the system using *Estimating Window* and *Manufacturing Window*.

The Estimating Window contains header information about the overall quote and line information defining the part, quantities quoted, costs, markups, and prices for each line. Additionally, message information about the quote, at both the header and line level, is available.

The Manufacturing Window contains the engineering definition for a quote. The Quote Master is a particular type of engineering definition that is used exclusively in the estimating process and is never used for actual production purposes. If a

Quote Master is to be used in production, its contents must be copied to a Work Order prior to such processing. Quote Masters are populated and maintained in the same manner as a Work Order except that they contain no status information. See the Work Order section for further details on the data requirements for populating data in the Manufacturing Window.

If the Quote Master is single level, you can use Quick Quote as a quicker way of building the definition.

The key decision areas for Estimating Window are listed below.

Basic Information

Each Quote is assigned a unique identifier that is used throughout the system. Additional information includes quote date, customer, and quote status.

Address

Each Quote has an address associated with it. This address is maintained in Customer Maintenance and selected in Estimating Window. If the customer is not known at the time of quote generation, the company name and address can be entered into the Quote without being added to the customer master.

Contact

These fields are used to capture the main contact person and associated data. These data are populated from Customer Maintenance and can be overridden as required. If you did not reference a customer from the customer master, then the contact information can be entered manually into these fields.

Dates

Several dates are associated with each Quote to track and control the quoting process. These dates include won/loss, expires, follow-up, expect, and printed. Additional you can assign a quoted lead-time and win probability percentage that is used for revenue proforma reports.

Other

Fields here include sales rep, territory, free on board, ship via, discount code, currency, terms, and entity.

User Defined

Up to ten user defined fields can be established for each Quote. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Line Information

Each line contains information about the part, service charges, quantities quoted, costing source, customer part designation, and drawing numbers. Based on information entered on each line, complex costs are automatically calculated for each quantity. Based on these costs, you are able to enter markup formulas for each line and quantity.

Pricing

Here you are able to build percentage and amount markups for each of the following categories: purchased material, fabricated material, labor cost, burden cost, and service cost. The system then automatically calculates prices with the ability for you to override them as required. Once the prices are determined, you can enter a trade discount and an alternate unit of measure before calculating the final quoted prices.

Master Product Configurator

You are able to create the configuration for quoted items through the optional Master Product Configurator. The parts, options, and rules are entered and maintained in the Master Product Configurator which you are able to transport to from Estimating Window. The engineering definitions for each option are maintained in Manufacturing Window as Engineering Masters. The interface data that defines how the option pieces are to be assembled is maintained in Configurator Maintenance.

Work Orders

From the main VMFG window: Eng/Mfg\Manufacturing Window

Each Work Order contains header information about the overall Work Order, and multi-level subordinate “cards” that define materials, operations, and outside services. Additionally, message information about the Work Order is available at both the header and line level.

Header Basic Information

Each Work Order is assigned a unique identifier that is used throughout the system. This identifier is comprised of five elements: type, base, lot, split, and subordinate (leg). Additional information includes release date, want date, and quantity.

Header General

Fields here include engineered by, engineered date, drawing information, product code, and commodity code.

Header User Defined

Up to ten defined fields can be established for each Work Order. The label's for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Header General Ledger Accounts

If you are using the VISUAL Financials interface, there are four General Ledger accounts associated with a Work Order. These are Work in Process accounts for each of the four cost categories: Material, Labor, Burden, and Service. Normally, VISUAL reads these accounts from the Product Code definition, if one is associated with the Part ID, or from the default G/L account interface settings. If you wish to override them for any work order produced from this master, press the G/L accounts, enter each account, or select one by pressing the appropriate button.

Header Variables

These fields are used to define variable dimensions referenced in material requirements. When a Work Order is created from this master, VISUAL copies the value you specify here as the default. You can then modify the variable values for each new Work Order. This allows you to adjust work order required quantities without modifying individual material requirements.

Work Order Co-Products

You are able to specify multiple co-products for each Work Order. Co-product is an additional part produced by a work order, in addition to the main part. A Work Order specifies a part in its header that is considered the main part of the order. This part may or may not be assigned a part number. The co-product list specifies the additional parts that are made with the main part. All co-products must have part numbers. Additional fields here are the breakdown of cost by percentage in each of the categories of material, labor, burden, and service.

Operation Basic Information

Each operation is assigned a unique leg number and sequence number. The leg number is assigned by the system away from user interaction. The sequence number is pre-assigned but can be changed by the user. You should avoid assigning any significance to the sequence number (such as drawing designator) and reserve it strictly for sequencing the operations. Other reference fields exist for cross-reference purposes.

Each operation is defined by a Shop Resource. Shop Resources are maintained in Shop Resource Maintenance and selected in the operation. All data are copied from the respective Shop Resource and can be overridden as required.

If the Shop Resource chosen is a contractor (outside service) then you must also choose a Service ID. Service ID's are maintained in Service Maintenance.

A labor saving feature is to use Operation Types. These types contain specific template configurations for the use of a Shop Resource. Upon selecting a type all or some of the information below is populated depending on how complete the type was originally defined. Operation Types are maintained in Shop Resource Maintenance.

Operation Setup/Run

Fields here include setup hours, run, run type, load size, move hours, minimum move hours.

Operation Other

Fields here include quality test, drawing information, minimum capacity usage, maximum capacity usage, and several scheduling and lot trace control parameters.

Operation Costs

Fields here include the various cost data brought in from the Shop Resource including run, setup, and burden costs.

Operation Advanced

These fields define the Shop Resources that are required concurrently with the main primary Shop Resource. Additional fields define the duration percent and whether each concurrent resource is required at the beginning or end of the operation.

Operation Scrap/Yield

These fields contain scrap and yield percentages with the ability to manually override the calculated values with firm quantities.

Operation Service

If the operation being defined is an outside service, then these fields become available for populating. Data includes vendor, service part, and warehouse.

Operation Quote

If the master is a Quote Master, then these fields become available for populating. Data includes quantity, unit cost, base charge, and minimum charge.

Operation User Defined

Up to ten defined fields can be established for each operation. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Material Basic Information

Each material is assigned a unique leg number and piece number. The leg number is assigned by the system away from user interaction. The piece number is pre-assigned but can be changed by the user. You should avoid assigning any significance to the piece number (such as drawing designator) and reserve it strictly for sequencing the operations. Other reference fields exist for cross-reference purposes.

Each material is defined by a part, however these parts do not have to reside in the part master and can be simply described for one-time use. Parts that are in the master are maintained in Part Maintenance.

Material Quantities

These fields include quantity per, fixed quantity, scrap percentage, dimensions (for use with Work Order variables), reference designator, usage unit of measure, and dimensional inventory parameters.

Material Specifications

A free form field is provided for detailed descriptions and instructions. Also included is effective date, discontinue date, and drawing information.

Material Costs

Fields here include the various cost data brought in from the Part including material, labor, burden, service, and fixed costs.

Material Vendor

Specify a vendor for a non-inventory part. This might be a part on a Quote Master that has yet to be given a master, or a special part for a job that will never be given a master. This provides a vendor to be used when purchasing the material to the job.

Material Planning

Planning lead-time for the part can be entered here to override the standard lead-time defined in the Part Maintenance.

Material User Defined

Up to ten defined fields can be established for each material. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Customer Orders

From the main VMFG window: Sales\Customer Order Entry

All order entry activity is entered and maintained in the system using *Customer Order Entry*. The Customer Order contains header information about the overall order and line information defining the part and quantity for each line. Additionally, message information about the order, at both the header and line level, is available. The key decision areas for Customer Order Entry are listed below.

Basic Information

Each Customer Order is assigned a unique identifier that is used throughout the system. Additional information includes order date, ship date, promise date, customer purchase order, terms, and order status.

Sold To/Ship To

Each order has a Sold To and optionally a Ship To address associated with it. Both of these addresses are defined in Customer Maintenance and selected in Customer Order Entry.

Contact

These fields are used to capture the main contact person and associated data. These data are populated from Customer Maintenance and can be overridden as required.

EDI

For single part orders, you can monitor accumulators at the header level; for multi-part orders, you can monitor accumulators for each line item.

Other

Fields here include Sales Rep, Territory, Sales Tax, Discount Code, and Entity ID. All of these are copied from Customer Maintenance and can be overridden as required.

User Defined

Up to ten user defined fields can be established for each Customer Order. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Shipping Addresses

From the Customer Order Entry window: Edit\Shipping Address...

Commission Sharing

From the Customer Order Entry window: Edit\Commission Sharing...

Commission Sharing allows to split commission revenue dollars between two or more sales reps. This information is initially entered into the customer table through Customer Maintenance.

The standard Commission Sharing defined in Customer Maintenance defines a percentage of total commission that is shared between the specified Sales Representative and another one. Note that this percentage is a portion of the total commission, not of the total order. The Commission Sharing option within Customer Order Entry allows you to override the standard sharing. This is particularly useful when the rep has agreed to share commission for a particular order. You must enter a valid Sales Rep for the order to view and/or override commission sharing.

Currency Hedging

From the Customer Order Entry window: Edit/Set/Reset Exchange Rates...

When you enter a customer order that uses a foreign currency, Customer Order Entry automatically obtains the currency from the vendor and exchange rate from Currency Exchange Rate Maintenance. VISUAL uses the exchange rate based on the date of the transaction. You can, however, fix the exchange rates for individual orders manually. This allows you to set the exchange rates on a per order basis. Use Customer Order Entry to set exchange rates for individual orders.

Line Information

Each line contains information about the part, quantity, unit of measure, ship date, ship to, General Ledger accounts, and allocation parameters. Most of these data come from Part Maintenance for the respective part and can be overridden as required. You are able to assign supply to each Customer Order line to fulfill the quantitative needs of the line. Possible source of supply include: co-products, inventory, Purchase Orders, purchase order delivery schedule, Inter Branch Transfers, and Work Orders.

Line Delivery Schedule

For each line on the Customer Order an unlimited number of Delivery Schedule lines can be defined. The Delivery Schedule allows you to use multiple delivery dates without breaking an order into multiple order lines. You are also able to assign supply to the Delivery Schedule in the same manner as is done with Customer Order lines.

Line Accounting Information

From the Customer Order Entry window: Edit/Cost of Goods Sold G/L Accounts...

Customer Order Entry allows you to override or specify cost of goods sold expense accounts for each line item by individual cost category. These accounts are debited for actual or standard cost of shipped items, depending on the costing method in use.

Progress Billings

From the main VMFG window: Receivables\Progress Billing Entry

Progress Billing is the procedure of billing a customer incrementally for goods and/or services before the actual goods or services are available for you to deliver.

Progress costing is the procedure of expensing costs incrementally for goods and/or services as a result of revenue recognition taking place during progress billing.

Basic Information

The Customer Order ID is used to track the Progress Billing throughout the system.

Line Information

Each line of the Progress Billing is the same as the Customer Order. Additional information associated with each line includes the Work Order, events, and milestones.

Line Events

A billing event is a pre-planned step that results in the creation of an invoice for presentation to the customer, and a posting to the General Ledger based on revenue recognition parameters that you have set up on that event.

Billing is organized as a user-defined series of events. You can define events for each customer order line item. Each line item may have virtually any number of events.

Information here includes a sequence number, description, billing amount or percent, revenue amount or percent, General Ledger account, event date, and milestone.

Line Milestones

A milestone is a point in time. Typically, a milestone is the completion of a specified operation in a work order or master. Each operation of a milestone must have the milestone ID in it. This permits the correct functioning of a multi-level work order and also permits out of sequence milestones.

Master Production Schedule

From the Material Planning window: File\Master Production Schedule

The Master Production Schedule function has two main uses: Setting and maintaining a forecast of demand for the current part, and setting and maintaining the part's master production schedule for MRP to use when generating planned orders.

A Forecast consists of a list of periods and predictions of quantity demanded for each period. You have complete flexibility in choosing the sizes of your Forecast periods. The Forecast Quantity specified on a line applies to the period starting with the Forecast Date for the line, and ending with the Forecast Date on the next line. You can define and maintain the forecast in the two ways described below.

The Master Production Schedule specifies actual quantities and due dates for production. MRP transforms these quantities into planned orders.

Planning Bill of Material

From the Material Planning Window: File\Planning Bill of Material...

A Planning Bill of Material indirectly forecasts or plans several parts by allowing you to manipulate the relationship between the parent and subordinate parts and by providing a single forecast or plan for the parent part. In some cases, planning bills are multi-level. In this case, manipulating the top-most parent's forecast results in all forecasts at the lower levels.

Planning parts are not real parts and are maintained outside of the main parts table. At the lowest level, the planning bill of material refers to the actual part table. This level can have no further planned parts below it.

Planning Forecast

From the Material Planning window: File\Planning Forecast...

You can add and delete planning Forecasts in Repetitive Manufacturing. You can add multiple Forecasts for each part. Information here includes Forecast ID, status, and quantity by date.

Customer Forecasts

From the Material Planning window: File\Master Production Schedule...(button)\Customer Forecasts...(button)

You can add and delete customer Forecasts in Repetitive Manufacturing. You can add multiple Forecasts for each part and customer. Information here includes Forecast ID, and quantity by required date.

Return Material Authorizations

From the main VMFG window: Sales\Return Material Authorization

All Return Material Authorization activity is entered and maintained in the system using *Return Material Authorization*. The Return Material Authorization contains header information about the original order, and line information defining the parts being returned. Additionally, message information about the RMA, at both the header and line level, is available.

Basic Information

Each Return Material Authorization is assigned a unique identifier that is used throughout the system. Additional information includes a reference to the original Customer Order and Packlist, type of RMA, status, and reason for return.

Line Information

Each line contains information from the original order such as part, quantity, Work Order link, and revenue account. You enter the quantity authorized to be returned on each line. For repair RMA's the price can be determined upon completion of the repairs.

Price Repair Orders

Here you are able to enter an hourly rate and markups for each of labor, material, burden, and service. From these data the system computes the repair order price.

Purchase Orders

From the main VMFG window: Purchasing\Purchase Order Entry

All purchasing activity is entered and maintained in the system using *Purchase Order Entry*. The Purchase Order contains header information about the overall order and line information defining the part and quantity information for each line. Additionally, message information about the order, at both the header and line level, is available. The key decision areas for Purchase Order Entry are listed below.

Basic Information

Each Purchase Order is assigned a unique identifier that is used throughout the system. Additional information includes order data, desired receive date, original promise date, warehouse, terms, and order status.

Purchase From/Ship To

Each order has a Purchase From and optionally a Ship To address associated with it. Both of these addresses are defined in Vendor Maintenance and selected in Purchase Order Entry.

Contact

These fields are used to capture the main contact person and associated data. These data are populated from Vendor Maintenance and can be overridden as required.

Dispatch

Here you can enter the FOB, ship from address, ship to address, and Ship Via for an outside service dispatch.

EDI

Enter EDI blanket order information here including EDI Blanket PO Number, and Contract ID.

Other

Fields here include Entity ID, and a flag indicating if the Purchase Order has been printed.

User Defined

Up to ten user defined fields can be established for each Purchase Order. The labels for the fields can be custom defined in an unlimited number of sets. These fields are reference purposes and custom report writing.

Currency Hedging

From the Purchase Order Entry window: Edit\Set/Reset Exchange Rates...

Use Purchase Order Entry to set rates for individual orders. When you enter a Purchase Order for a vendor that uses a foreign currency, Purchase Order Entry automatically obtains the current exchange rate from Currency Exchange Rate Maintenance. You can, however, fix the exchange rates for individual orders manually. This allows you to set the exchange rates on a per order basis.

Line Information

Each line contains information about the part or service, quantity, unit of measure, piece tracking dimensions, receive date, promise date, cost, General Ledger accounts, and allocation parameters. In addition each line can be linked to a Work Order requirement. Most of these data come from Part Maintenance for the respective part and can be overridden as required. You are able to assign specific demand to each Purchase Order line to fulfill the quantitative needs of the line. Possible sources of demand include Customer Order, Customer Order Delivery Schedules, Inter Branch Transfers, Work Order material requirements, and inventory.

Line Delivery Schedule

For each line on the Purchase Order an unlimited number of delivery schedule line can be defined. The delivery schedule allows you to use multiple delivery dates without breaking an order into multiple order lines. You are also able to assign demand to the delivery schedule in the same manner as is done with Purchase Order lines.

Assign to Demand

From the Purchase Order Entry window: Edit\Assign to Demand...

You can allocate service purchase order line quantities to work order material operations demand using the Assign to Demand option available from the Edit menu in the Purchase Order Entry window.

Service Dispatches

From the main VMFG window: Purchasing\Service Dispatch Entry

You can manage your outside service by dispatching the materials to the contractors. Service dispatches are entered and maintained in *Service Dispatch*. The Service Dispatch contains header information and line information for each item being dispatched to the vendor. When an outside service is sent outside for servicing, a Dispatch document is used in conjunction with the Purchase Order that has been issued for the service.

Basic Information

Each Dispatch is assigned a unique identifier that is used throughout the system. Additional information includes Purchase Order ID, Vendor ID, actual dispatch date, free on board, and ship via.

Addresses

The Ship To address comes from Vendor Maintenance and is selected for the service dispatch. The Ship From address is the address from which the materials are being shipped. Ship From addresses are also maintained in Vendor Maintenance.

Line Information

The dispatch line contains information from the associated Purchase Order and includes the following maintainable data: dispatch quantity, actual freight, shipping weight, unit of measure, cost, and packaging information.

Vendor Request for Quote

From the main VMFG window: Purchasing\Vendor RFQ Entry

All vendor Request For Quote activity is entered and maintained in the system using *Vendor RFQ Entry*. The Vendor RFQ contains header information about the overall quote and line information defining the part and quantity. Additionally, message information about the quote, at both the header and line level, is available. The key decision areas for Vendor RFQ Entry are listed below.

Basic Information

Each Vendor RFQ is assigned a unique identifier that is used throughout the system. Additional information includes quote date, customer quote identifier, quote status, quote date, follow-up date, expiration date, expected date, Free On Board, Ship Via, and Buyer.

Address

Each quote has an address associated with it. This address is maintained in Vendor Maintenance and selected in Vendor RFQ Entry.

Contact

These fields are used to capture the main contact person and associated data. These data are populated from Vendor Maintenance and can be overridden as required.

Line Information

Each line contains information about the part or service, unit of measure, multiple quantities to be quoted, and vendor/manufacture numbers. Most of these data come from Part Maintenance for the respective part and can be overridden as required.

Purchase Receipts

From the main VMFG window: Purchasing\Purchase Receipt Entry

All purchase receiving activity is entered and maintained in the system using *Purchase Receipt Entry*. All receiving activity is centered on a *Receiver*. The Receiver contains header information about the overall receipt and line information defining the part and quantity information relative the each line processed. Additionally, message information about the receipt, at both the header and line level, is available. The key decision areas for Purchase Receipt Entry are listed below.

Basic Information

Each Receiver is assigned a unique identifier that is used throughout the system. Additional information includes actual receipt date, actual FOB, and actual ship via.

User Defined

Up to ten user defined fields can be established for each Receiver. The labels for the fields can be custom defined in an unlimited number of sets. These fields are for reference purposes and custom report writing.

Line Information

The Receiver line contains information from the associated Purchase Order and includes the following maintainable data: quantity received, dimensional inventory parameters, warehouse, and HTS Code.

Line Part Trace

For receipt lines that contain a traceable part you need to enter quantity, lot identifier, expiration dates, and the properties specified in Part Trace Profile Maintenance.

Line Delivery Schedule

As you receive purchase order delivery schedule lines into the appropriate receiving warehouse location, you can also at that time choose to assign all or a portion of this received quantity to sources of demand. These include, customer orders, inventory, work order material requirement demand, work order material operation demand, and Inter Branch Transfers.

Assign Receipt Quantity to Demand Links

As you receive Purchase Order lines into the appropriate receiving warehouse location, you can also at that time choose to assign all or a portion of this received quantity to sources of demand. These include, customer orders, inventory, work order material requirement demand, work order material operation demand, and Inter Branch Transfers.

Service Receipts

From the main VMFG window: Purchasing\Outside Service Receipt Entry

All Service Receipts are entered and maintained in the system using *Service Receipt Entry*. A Service Receipt is an optional way of indicating to the Scheduler that an outside service is complete when a Purchase Order is not issued for the service. A Service Receipt is implied when the service is on a Purchase Order and received with a Receiver.

Each Service Receipt is assigned a unique identifier that is used throughout the system. Information to be entered here includes Work Order ID, Operation Sequence No, Transaction Date, Vendor ID, quantity received, and cost information.

Labor Tickets

From the main VMFG window: Eng/Mfg\Labor Ticket Entry

Use *Labor Ticket Entry* to record labor transactions. Labor transactions serve three major purposes: First, it records the accumulation of direct labor hours expended against a work order. If you are using actual costing, VISUAL uses this data to calculate actual labor costs and resource burdens for the work order. If you are using standard costing, VISUAL uses this data to report the accumulation of cost and in computing the variance between standard and actual costs.

Second, it records current work order status. Labor Ticket transactions for direct labor indicate whether the setup and/or run for a given operation of a work order is completed, and also the current number of pieces completed. Thus, the correctness of the system's knowledge of current shop status depends upon timely entry of Labor Ticket transactions.

Third, it records the accumulation of indirect labor hours. Labor Ticket Entry also allows the recording of indirect labor hours. This includes time logged for meals, breaks, meetings, or other time not specific to a work order. You can transfer these transactions to a special indirect labor journal using the Costing Utilities.

Each Labor Ticket is assigned a unique identifier that is used throughout the system. Information to be entered here includes Employee ID, Transaction Type, Work Order ID, Earning Code, Clock-In Time, Clock-Out Time, Elapsed Hours, Break Hours, Quantity Completed, Description, and flags indicating completion status.

Part Trace

For Labor Tickets that contain a traceable part you need to enter quantity, lot identifier, expiration dates, and the properties specified in Part Trace Profile Maintenance.

Inventory Transactions

From the main VMFG window: Inventory\Inventory Transaction Entry

An *Inventory Transaction* is used to record all movement of inventory throughout the system. Each transaction has cost, quantity, and other data associated with it.

Each Inventory Transaction is assigned a unique identifier that is used throughout the system. Information to be entered here includes Transaction ID, Work Order ID, type of transaction, quantity, warehouse, location, and description. For certain types of inventory transactions you can manually enter cost information.

Dimensional Inventory

For dimensional inventory parts you need to enter dimension parameters.

Part Trace

For Inventory Transactions that contain a traceable part, you need to enter quantity, lot identifier, expiration dates, and the properties specified in Part Trace Profile Maintenance.

Shipments

From the main VMFG window: Sales\Shipping Entry

All shipping activity is entered and maintained in the system using *Shipping Entry*. The Shipper contains header information about the overall shipment and line information defining the part information relative to each line processed. Additionally, message information about the shipment, at both the header and line level, is available. A report version of the Shipper, known as a *packing list*, is used to physically accompany the parts.

Basic Information

Each Shipper is assigned a unique identifier that is used throughout the system. Additional information includes actual ship date, FOB, Ship Via, and Ship Status.

Line Information

The Shipper line contains information from the associated Customer Order and includes the following maintainable data: Ship Quantity, Actual Freight, warehouse information, and shipping information.

Part Trace

For Shippers that contain a traceable part, you need to enter quantity, lot identifier, expiration dates, and the properties specified in Part Trace Profile Maintenance.

Assign Ship Quantity to Supply

You must assign supply links to customer order lines in Customer Order Entry before you ship them. If you have not attached supply links to a customer order line, this option is of no use to you.

Bills of Lading

From the Shipping Entry window: File\Print Bills of Lading...

A Bill of Lading is a legal document that defines ownership of goods being transported via a commercial carrier. This document is usually handed to the driver when a shipment goes out. You should generate a Bill of Lading per customer, per shipping destination. For example, if you have two shipments going to two different locations for one customer, you should generate two Bills of Lading.

Basic Information

Each Bill of Lading is assigned a unique identifier that is used throughout the system.

General

Information here includes selecting the document format, Carrier ID, ASN ID, Ship Date, and Ship To Address.

Value/COD

Information here includes the declared value, COD information, and freight terms.

Instruction

Enter here ship instructions, route, and the vehicle number.

Packlists

Enter here all Packlists that are associated with this Bill of Lading.

Line Information

Each line contains information about each package that is being shipped with the Bill of Lading.

Inter Branch Transfer

From the main VMFG window: Inventory\Inter Branch Xfer Entry

An Inter Branch Transfer allows you to move inventory from one warehouse transit location to another warehouse location. You may need to move inventory quantities in order to replenish dwindling supply in a particular warehouse, one from which a large volume of customer orders is regularly fulfilled.

VISUAL does not let you save IBT lines unless you have at least one location in each warehouse with the same ID as the warehouse itself. For example, warehouse MMC-MAIN, must have a location MMC-MAIN. Enter these identical Location IDs in Warehouse Maintenance before attempting to enter and save any IBT lines.

Basic Information

Each Inter Branch Transfer is assigned a unique identifier that is used throughout the system. You also need to enter the From Warehouse and To Warehouse, Desired Ship Date, Desired Receive Date, Transit Days, and transportation information.

Line Information

Each line contains the parts that are to be transferred. Information to be entered here includes Part ID, quantity, and packaging information.

Assign Supply to IBT Line

From the Inter Branch Xfer Entry window: Edit\Assign Supply to IBT Line...

VISUAL automatically assigns supply to outgoing IBT lines from available inventory quantities in the From Warehouse, or the warehouse from which the transfer originates. However, if VISUAL does not find sufficient supply, or fails to

hard allocate the required quantity, you can “soft” allocate supply from other sources, or borrow against future quantities that you expect to receive. When you soft allocate to demand, you assign unreceived but entered and confirmed quantities from purchase order lines, purchase order delivery schedules, warehouse inventory, work orders quantities, co-products, and incoming transfers to the outgoing line at hand to meet its quantitative requirements.

Assign Demand to IBT Line

From the Inter Branch Xfer Entry window: Edit\Assign Demand to IBT Line...

As you can assign supply to outgoing IBT lines, you can in turn assign outgoing IBTs to demand. These include Customer Order, Customer Order delivery schedule, Work Order material requirement, and IBT transfer.

Inter Branch Transfer Shipping Entry

From the main VMFG window: Inventory\Inter Branch Xfer Shipping Entry

After you have entered and saved an IBT, use the *Inter Branch Transfer Shipping Entry* window to ship the IBT. This window closely resembles the Shipping Entry window used to ship customer orders. Inter Branch Transfer Shipping Entry supports many of the same features as Shipping Entry.

Basic Information

Each IBT shipment is assigned a unique identifier that is used throughout the system. You also need to enter the actual shipping date, and Ship Via.

Line Information

Enter on each line the actual quantity shipped, actual freight charges, and packaging information.

Trace

For IBT Shippers that contain a traceable part, you need to enter quantity, lot identifier, expiration dates, and the properties specified in Part Trace Profile Maintenance.

Assign Ship Quantity to Supply

From the Inter Branch Xfer Shipping Entry window: Edit\Assign Ship Quantity to Supply Links...

You can assign an IBT ship quantity to one if its supply links before shipping.

Inter Branch Transfer Receipts Entry

From the main VMFG window: Inventory\Inter Branch Xfer Receipts Entry

After you have entered and shipped an IBT transfer, use *Inter Branch Transfer Receipts Entry* to receive the shipped IBT quantities. IBT Receipts Entry is similar to Purchase Receipt Entry, which you use to receive Purchase Orders.

Basic Information

Each IBT receipt is assigned a unique identifier that is used throughout the system. You also need to enter the actual receipt date, and Ship Via.

Line Information

Enter on each line the actual quantity received.

Trace

For IBT Receivers that contain a traceable part you need to enter quantity, lot identifier, expiration dates, and the properties specified in Part Trace Profile Maintenance.

Assign Receipt Quantity To Demand

From the Inter Branch Xfer Shipping Entry window: Edit\Assign Receipt Quantity to Demand Links...

As you receive IBT lines into the appropriate receiving warehouse location, you can also at that time choose to assign all or a portion of this received quantity to sources of demand. Sources of demand include, customer orders, customer order delivery schedules, inventory, work order material requirement demand, work order material operation demand, and inter branch transfers.

Invoices

From the main VMFG window: Receivables\Invoice Forms

As product is manufactured and shipped, an *Invoice* is created to bill the customer for monies owed. The actual creation of the Invoice is done in this subsystem. Subsequent processing of the Invoice is done outside of this subsystem. You need to enter or revise actual freight charges, and various printing parameters. All other information is taken from shipping documents.

Credit Memorandum

From the main VMFG window: Receivables\Invoice Forms

A *Credit Memorandum* is issued when a customer returns a product that has been previously shipped and invoiced or when there has been a price adjustment on an invoice already in the system. These credit memos represent monies owed to the customer so they work opposite of an invoice. Credit Memorandums are produced automatically with Invoices.

Accounts Payable Vouchers

From the main VMFG window: Payables\Invoice Entry

Vendor invoices are represented in the system as *Vouchers* that contain posting detail and matching information to purchasing if applicable.

Basic Information

Each Voucher is assigned a unique identifier that is used throughout the system. Additional information includes vendor, vendor invoice, Entity ID, and invoice total.

General

These fields include the type of document, status, Currency ID, terms, payable account, and control dates.

Remit To

The Remit To address is selected here from the list maintained in Vendor Maintenance.

Withholding

If this Voucher is subject to withholding, enter the applicable information here.

Currency Hedging

From the Invoice Entry window: Edit/Set/Reset Exchange Rates...

When you enter a Voucher that uses a foreign currency, A/P Invoice Entry automatically obtains the currency from the vendor and exchange rate from Currency Exchange Rate Maintenance. VISUAL uses the exchange rate based on the date of the transaction. You can, however, fix the exchange rates for individual vouchers manually. This allows you to set the exchange rates on a per Voucher basis.

Line Information

The Voucher line includes quantity, Purchase Order reference information, General Ledger account, amount, fixed charge, and Work Order information.

Line Currency Hedging

From the Invoice Entry window: Edit/Set/Reset Exchange Rate Lines...

Like enter currency exchange rate information for the overall Voucher, you can also enter this information on a line-by-line basis if required.

Recurring Payables

From the Invoice Entry window: Edit/Recurring Payables...

VISUAL allows you to create payables to generate on a regular systematic basis. The intent of the Recurring Payables is to automatically create vouchers on a user definable schedule.

Basic Information

Each Recurring Voucher is assigned a unique identifier that is used throughout the system. Additional information includes vendor, Entity ID, and invoice total.

General

These fields include the type of document, status, Currency ID, terms, payable account, and control dates. You can group Recurring Vouchers into user defined groups that can be triggered together.

Triggering

Here you define the frequency of triggering the Recurring Voucher, maximum times to apply, and an expiration date.

Remit To

The Remit To address is selected here from the list maintained in Vendor Maintenance.

Withholding

If this Voucher is subject to withholding, enter the applicable information here.

Line Information

The Recurring Voucher line includes quantity, General Ledger account, amount, and fixed charge.

Accounts Payable Disbursements

From the main VMFG window: Payables\Payment Entry

Fully or partially paid Accounts Payable Vouchers are represented by a *Disbursement*. This document contains posting detail and payment information.

Basic Information

Each payment is assigned a unique identifier called a *Control Number* that is used throughout the system. Additional information includes Entity ID, Bank Account ID, Currency ID, vendor information, payment number, amount, and the type of output to be produced.

Currency Hedging

From the Payment Entry window: Edit/Set/Reset Exchange Rates...

When you enter a Payment that uses a foreign currency, A/P Payment Entry automatically obtains the currency from the vendor and exchange rate from Currency Exchange Rate Maintenance. VISUAL uses the exchange rate based on the date of the transaction. You can, however, fix the exchange rates for individual payments manually. This allows you to set the exchange rates on a per payment basis.

Line Information

The payment line includes Voucher ID, General Ledger account, payment, discount applied, and withholding information.

Accounts Receivable Invoices

From the main VMFG window: Receivables\Invoice Entry

A receivable can either be from invoicing activity as a result of shipments or as manually entered invoices in *Invoice Entry*.

Basic Information

Each Invoice is assigned a unique identifier that is used throughout the system. Additional information includes customer, Entity ID, and invoice total.

General

These fields include the type of document, Currency ID, terms, receivable account, and control dates. In addition, you can associate the invoice with a Customer Order so that any prepayment is automatically deducted from the balance due on the invoice.

Sold/Bill To

The Sold To and Bill To addresses are taken automatically from the Customer.

Collections

From the Invoice Entry window: Info\Collections...

The Collections module enhances the collections and credit management efforts of the Receivables Department by tracking the status of open receivables. You can enter notes and payment schedule information here.

Currency Hedging

From the Invoice Entry window: Edit\Set/Reset Exchange Rates...

When you enter an invoice that uses a foreign currency, A/R Invoice Entry automatically obtains the currency from the customer and exchange rate from Currency Exchange Rate Maintenance. VISUAL uses the exchange rate based on the date of the transaction. You can, however, fix the exchange rates for individual vouchers manually. This allows you to set the exchange rates on a per invoice basis.

Line Information

The invoice line includes quantity, reference information, General Ledger account, amount, and commission.

Recurring Receivables

From the Invoice Entry window: Edit\Recurring Receivables...

VISUAL allows you to create receivables to generate on a regular systematic basis. The intent of the Recurring Receivables is to automatically create invoices on a user definable schedule.

Basic Information

Each Recurring Receivable is assigned a unique identifier that is used throughout the system. Additional information includes customer, Entity ID, and invoice total.

General

These fields include the type of document, Currency ID, terms, and receivable account. You can group Recurring Invoices into user defined groups that can be triggered together.

Triggering

Here you define the frequency of triggering the Recurring Invoice, maximum times to apply, and an expiration date.

Sold/Bill To

The Sold To and Bill To addresses are selected here from the list maintained in Customer Maintenance.

Line Information

The Recurring Invoice line includes quantity, reference information, General Ledger account, and amount.

Accounts Receivables Cash Receipts

From the main VMFG window: Receivables\Cash Application

Payment receipts from customers are represented by this document. This document contains payment information in addition to posting information.

Basic Information

Each Cash Application is assigned a unique identifier that is used throughout the system. Additional information includes customer, Entity ID, bank account, payment method, amount, payment date, posting date, and Deposit ID.

Currency Hedging

From the Cash Application window: Edit\Set/Reset Exchange Rates...

When you enter payment that uses a foreign currency, A/R Cash Application automatically obtains the currency from the customer and exchange rate from Currency Exchange Rate Maintenance. VISUAL uses the exchange rate based on the date of the transaction. You can, however, fix the exchange rates for individual payments manually. This allows you to set the exchange rates on a per payment basis.

General Ledger Account Balances

From the main VMFG window: Ledger\General Journal Entry

Each account in the General Ledger has a balance associated with it. This balance is created from batch detail from both VISUAL Manufacturing and VISUAL Financials. Initial account balances are entered by creating a journal entry.

Basic Information

Each General Journal Entry is assigned a unique identifier that is used throughout the system. Additional information includes Entity ID, description, date, and Currency ID.

Currency Hedging

From the General Journal Entry window: Edit\Set/Reset Exchange Rates...

When you enter a journal that uses a foreign currency, G/L Journal Entry automatically obtains the exchange rate from Currency Exchange Rate Maintenance. VISUAL uses the exchange rate based on the date of the transaction. You can, however, fix the exchange rates for individual journals manually. This allows you to set the exchange rates on a per journal basis.

Line Information

The journal line includes General Ledger account, Entity ID, Debit Amount, Credit Amount, and reference.

Budget

From the main VMFG window: Ledger\Accounting Window

VISUAL specifies Budget (or Forecasted) amounts directly to an account using Accounting Window. They are maintained on a period-by-period basis for the fiscal year (budget amounts for balance sheet accounts are not balance forwarded).

You can enter Budgets at the Posting or Summary level of the account hierarchy, whichever serves the reporting requirements of your company. Like Actuals, when you define relationships, VISUAL implodes amounts to parent accounts.

Because you can enter budget amounts at either the Posting or Summary levels, you must be extremely careful to maintain consistency to which level you use for budgeting to ensure the accuracy of the budget and forecast reports.

General Ledger Revaluation

From the main VMFG window: Ledger\Revaluation

VISUAL incorporates all of the functionality needed to conform to reporting agency regulations. All countries require foreign currency trial balances to be revalued to the organizations reporting currency.

Amounts denominated in currencies outside a nation's normal currency fluctuate daily. Account revaluation is the process of assessing and resetting currency balances to reflect a company's true currency exposure. Revaluation is a task necessary that any multi-distributed organization that crosses country boundaries must perform.

The main revaluation sequence is to revalue monetary asset accounts and most liability accounts to the currency spot rate (rate as of a given day).

Currency revaluation, in relation to subsidiary accounts in accounts receivable and accounts payable, only affect accounts with an open balance. Revaluation never affects transactions that have been settled in full. Transactions always hold their original exchange rates at the time of posting. Revaluation adjusts the equivalent balance of non-local transactions to the local (and/or functional) currency based on spot rates while the transaction remains open. When payments are received the rate in effect on the receipt date is compared to the original rate for determination of currency exchange gains and losses. After invoices are fully paid, currency balances could remain as a result of periodic revaluation. VISUAL compares all zero value transactions and properly adjust out any remaining currency values during the revaluation process.

Basic Information

Each Currency Revaluation is assigned a unique identifier that is used throughout the system. Fields here include Entity ID, and posting date.

Rates

The ending period and date are referenced here. You enter Rates Dated, Currency ID, spot conversions, and average conversions.

Accounts

You can enter an individual account or account group that you want to revalue. Each line contains a line number, account, description, account type, group, and revaluation method.

Cash Book

From the main VMFG window: Cash\Cash Book

Cash Book is VISUAL's bank account management tool. All of the cash transactions created by the Accounts Payable Payment Entry feature and the Accounts Receivable Cash Application feature to facilitate your bank reconciliation. Cash Book also allows you to manually enter adjustment transactions to the bank account, such as bank interest, fees, transfers, and automatic deposits and withdrawals.

Historical Data

As mentioned in the introduction of this section, Historical Data can consist of either or both static and dynamic data. For example, it may be desirable to load old part numbers into the system for cross-reference purposes. Typically, historical data is going to be dynamic data such as paid invoices, shipped orders, and the like. One possibility is to import just summary information. For example, you could indicate on closed Customer Orders the quantity shipped. However, do not actually import the shippers and invoices.

It is important not to get too distracted with historical information during the implementation. Getting clean and usable static and dynamic data into the system is a large effort in itself. Try to minimize historical data loading to that which is critical to the operation of the company once live on VISUAL. It is less distracting to load historical data later after the system is live and stable.

Also be very careful about loading transactional information that effects inventory and cost accounting. These areas of the system are quite complex and are subject to re-valuation after going live. You are better off only loading starting balances and simply reference historical information.

Data Menu Paths

Since VISUAL Manufacturing warehouses a great deal of business data, it can at times be overwhelming to remember where each type of data is maintained within the menu system. To aid with the data loading process the table below cross-references each type of data with the associated menu path where the data is maintained.

Training and Testing

Training and testing, while completely separate pieces of your VISUAL implementation, need to be considered together. Making your VISUAL environment as robust as possible will require extensive system testing. Extensive testing will require that the testers are very competent in using the system. Typically, users will develop and test their own procedures prior to the first testing phase so be sure and schedule adequate training prior to this. Consider the following thought:

When it comes to ERP project planning, training should be one of your primary considerations. If executives allow training budgets to be set too low and too late, fatal mishaps can occur.

Excessive entry errors from poorly trained data entry people can sabotage a new order entry system, which in turn will cause your VISUAL implementation to fail.

Now think about this: can you recite that paragraph after reading it only once? For most of us, the answer is surely no. REPETITION, REPETITION, REPETITION. If once is good, then twice is better and three times is splendid. Most of us have to do things a couple if not several times before we fully grasp the concept. Training on your VISUAL system is no exception.

Users will need to be thoroughly versed in the functional capability of the VISUAL modules that they will be using in their jobs. Conference room pilots are a great way to help achieve this. Let end users run through a mock pilot of the applications they will be using. This will uncover any gaps between system design and business procedures and provide a way for training coordinators to see first-hand where more training is required.

By watching how the product is used and identifying problems, training materials can be tweaked early in the process.

After all of the users have been fully introduced to VISUAL and have acquired a familiarity with how to use the system, you can start stress-testing the application. Create scenarios where a typical end user's day is re-created and normal workload is simulated. You may even want to go so far as to create workload volumes that exceed a typical day's volume. See how VISUAL holds up in your environment given worst case scenarios. You will find out if your hardware decisions were appropriate. Remember, disk and memory are cheap ways to improve performance. Since end users participating in this stage should have already gone through the recommended standard training, this test should uncover any gaps that can be addressed prior to deployment.

Once implementation is complete, an ongoing training plan should be developed to train new employees, to help with upgrades or when additional modules are added, or to help users expand their capabilities. It's also helpful to identify a few power users across the organization who can offer constructive feedback about training needs.

Toolkit Forms: *Training Requirements - IMP-T6-FORM610 and Continuing Education - SOP-T8-FORM810.*

Work Plan

The first step in preparing the work plan for your implementation is to review the provided template to get a feel for the amount of detail you think is appropriate for your implementation effort. Since the Gantt template is inclusive of many possible ways of doing an implementation, it will be necessary to remove lines that are not appropriate and add others as necessary. These alterations are made not only because of differences in which modules are being implemented, but because the level of detail that is desirable for your organization. In reviewing the existing template, your core team may feel more comfortable knowing that all of the many details have been captured in one place.

Other core teams have reported that the shear of the task listing has been an eye-opener into just how much is involved for the teams.

Toolkit Forms: *Gantt Chart - IMP-T2-FORM210 and Current Business Model - IMP-T5-FORM512.*

There is a column on the Gantt chart entitled *Essentials* that references key tasks in this section. The table below lists each of these references.

REF	DESCRIPTION
-----	-------------

- | | |
|---|--|
| 1 | These tasks are where you initially pull together the project. By using the various forms referenced critical decisions of resources and scope will be captured. These forms should be distributed to all members of the teams. |
| 2 | There are many ways to document business processes. Methods include flowcharts, written instructions, and diagrams. Before starting the process of documenting the processes in your company the core team needs to decide on what method will be used. In this way everyone will have process documentation that is consistent. |
| 3 | <p>Implementing VISUAL Manufacturing requires many materials, it spans many weeks, and requires a great deal of organization.</p> <p>To aid in this process, it is very desirable to have one central area dedicated to the project. Ideally this would be a separate room that is used only for the implementation project. All resources are stored in this area and is where all meetings and planning activities take place.</p> |
| 4 | Most likely you will still require other information systems outside of VISUAL Manufacturing. You may, for example, choose to maintain information in an existing database or use spreadsheets to do certain data analysis. This step identifies how those systems will interface with VISUAL Manufacturing. Will the data move one way or two ways? Will the data be exported or accessed directly through ODBC? |
| 5 | Once an initial process is determined and documented the team should run sample data through VISUAL to see how well the process works. This prototyping is essential to fully flesh out the details of a process and identify potential problem areas prior to going live. |
| 6 | This step is the configuring of VISUAL. By taking the results of the configuration worksheets, the Application Global windows can be populated. While very simple to perform, great care should be taken in getting the settings correct for your business since many cannot be changed once the system is live. |

- 7 As new processes are developed it will become apparent what types of skill sets are required to make for a successful VISUAL implementation. It is generally a good idea to review the entire teams skill base and determine if some re-assignment or training is required to better align existing skills with what is going to be needed with VISUAL.
8. The first pilot run is usually intended to work out all functional details of the processes. The goal is to make sure that all aspects of information flow through the system as intended and that there are no oversights. This may take a fair amount of time to do correctly since each team member should be comfortable that information is being correctly passed to him or her from upstream processes. The financial team will be particularly busy in ensuring that all accounting entries arrive to their areas correctly.

Toolkit Forms: Pilot Run(s) Planning - IMP-T10-FORM1020 and Test Plan IMP-T10-FORM1018.

- 9 The second pilot run should only be performed when the functionality is reasonably certain. This pilot run is to check how the system will be perform and behave with many people working simultaneously. Interactions among team members will be fleshed out as well as any potential performance issues with the system. The goal here is put a typical load on the system and see how it performs. Avoid bombarding the system with transactions that would not normally be performed during a normal business day.
- 10 This is the big day where the system actually goes live. Generally this takes place over a long weekend which gives ample time for data conversions and validations. A great deal of care should be given to accurate data loading. It may also be desirable to have most team members available as backup in case things do not go as planned.

Security

Security measures must be developed to restrict unauthorized or unintentional misuse. Data integrity problems or data corruption can arise when security procedures allow users to access areas for which they have not been properly trained. A good rule of thumb is to start out with security that is highly restrictive and loosen it as specific needs arise.

There are a number of decisions you will need to make based on your system environment as well as decisions specific to VISUAL. From an environment perspective, you will need to consider the placement of files and who has access to what drives and directories. These are decisions that you are likely to already be dealing with for other systems.

There are some securities issues to consider that are specific to VISUAL. First, users get full system access by default. You must go into the security windows and limit them from the baseline of wide-open access to the system. A good practice is to immediately create a user called “READONLY” that has read-only access to the windows that most users will use. You may want to limit this “template” user so that it does not have access at all to some of the more sensitive windowpanes.

A second consideration relates to accessing your VISUAL data using tools other than VISUAL itself. By default users have read-only access to the data when they come through other tools such as SQL Talk or Microsoft Access.

For the vast majority of your users this will be exactly the way you want it to be. You may have some users, however, that need update capabilities to the data through these tools. This can be granted by using the Grant DBA command for these users. This will be especially useful in your testing database to be able to tweak data quickly and easily. However, be cautious since you probably won’t want users altering data that they should not be changing.

Status Reporting and Time Tracking

Our intent here is to simply offer some suggestions and offer a perspective of what the most useful things you can expect to gain by time tracking may be. The most beneficial opportunity that time tracking and status reporting provide is to measure your performance.

Once you build your initial estimated schedule, be sure to keep this as a baseline. Then, as you progress through your implementation, monitor your progress on a copy of this original schedule. This will provide you with the means for measuring your progress relative to your original goals.

This also provides you with the tools to quickly identify and adjust to a situation where you may be off your original schedule.

An excellent tool to help you construct such a schedule and measure your performance is a Gantt chart. A Gantt chart is a horizontal bar chart that graphically displays the time relationships between the different tasks in a project. It is a visual tool that helps provide a wonderful level of clarity to an otherwise complex project.

Project Review

Post Project Review

This step is an audit of the project with the members of the project team evaluating the project as objectively as possible. The goal of this step is to prepare documentation that provides a final report to management and creates a historical view of the performance on your project to aid in future projects.

Collect as much information as you possibly can. Remember to be thinking about this along the way. Be sure and inform your team members to document anything and everything that they feel is important to the status of the project when it happens. Record as much as you can while it is fresh in your mind to be sure and record all of the pertinent details.

Keep in mind that this is not a time to be reviewing VISUAL. You should also do that but as a part of another process.

The mission of this review is to critique your skills in implementing VISUAL. What did you do well? What would you improve upon in future projects? What would you not do again?

Lessons Learned

As a part of your review think about the lessons you learned. Some of the key areas to consider include:

- ☐ Project Requirements
- ☐ Schedule
- ☐ Budget
- ☐ Tracking and Control
- ☐ Team Issues
- ☐ Managing Relationships
- ☐ Rewards
- ☐ General Questions

On-Going Responsibilities

Once you turn VISUAL on and take it live, the work is far from over. There are many things that will continue to change and require resources. Granted, you will most likely need fewer resources than you did during your project implementation. However, you will still need to keep the growth and the development of your VISUAL system active and alive.

There will be developments and improvements required after you go live and you will need to play an active roll in integrating some of that functionality into your VISUAL system.

Maintenance

There are many routine maintenance tasks that you will need to consider ensuring that you have clean data in your VISUAL system.

Another concern will be to make sure that you have the most current version of the VISUAL software to help your users do their job in the most efficient and effective way possible. Let's talk about a few things you will want to consider.

Backups

Make sure you have a solid backup plan. The best thing you can possibly do is run some test scenarios of a crashed database. This is the only way to know for sure if your backup strategies work. Remember to take detailed notes!

Minimize the Opportunity for Violating Referential Integrity

Minimize the instances where data can get into your database through the “back door”. Any time you put data into your database in any way other than using the VISUAL window(s), you are exposing yourself to the risk of violating referential integrity. Do **not** do this unless you absolutely have to. If you must, then consult someone from Lilly before doing so.

Checking for VISUAL Updates on Lilly's Web Site

As mentioned before, there will be periodic updates to different VISUAL executables posted on Lilly's web site. Be sure to check the site on a regular basis to make sure you are taking full advantage of any updates that may benefit your user community.

Inclusions in Lilly Maintenance Agreement

Verse yourself on what is and isn't included in your VISUAL maintenance agreement. This will help eliminate any surprises during an emergency situation.

Training

Training is an integral part of your project execution phase. It is also an important consideration after you go live with VISUAL. A key part of your training in preparing to go live is your documentation. To this end, it is important that you keep these resources current. There are several situations where you may need these materials, including:

- ☐ Documentation for new users
- ☐ Cross training of existing users

Performance Measures and Tuning

There are a number of things that you can do to make sure that your database is running efficiently as possible. Some of these things include:

- ☐ Using Lilly provided tools to monitor and tweak your VISUAL performance
- ☐ Having a thorough understanding of your database OS and knowing how to tweak the OS settings to enhance database performance
- ☐ Monitoring times of peak utilization and leveling
- ☐ Carefully scheduling the times when resource intensive processes are run
- ☐ Create a data warehouse environment where reports can be run

The fewer users you have, the less important some of these tasks will be. Keep in mind that it is always better to be proactive about measuring performance and trying to isolate issues before they become serious problems.

Upgrades

System upgrades are a fact of life. Although, they can be almost as painful as new installations at time they are usually warranted. Your feedback along with all other VISUAL users will be pooled to come up with valuable enhancements to be bundled into future releases.

Keeping Living Documents Alive

The “Standard Operating Procedure Documentation” goes beyond the implementation phase into the operational life cycle of VISUAL Manufacturing. By maintaining these documents throughout the life cycle they become “living documents.” The procedures provided in this Toolkit are samples and must be modified to reflect your companies operations. These procedures represent a base line set of system documentation. As your company grows, so does the need for current and up to date documented operating procedures.

Resources

There are many resources available to you to help you make your VISUAL system as effective as possible. These resources include:

- ☐ Lilly technical support
- ☐ Your local Lilly Sales Associate
- ☐ User groups (local and international)
- ☐ Project management consultants
- ☐ SQLBase and Oracle consultants

Not sure who to call? Lilly and/or your Sales Associate will most likely have some good ideas.



Chapter 5 - Third Party Tools

Third Party Products

We will discuss three different categories of third party tools. The first type of tools will help you manage your implementation. These tools will enable you to chart your processes, track your progress and document your discoveries.

The second type of tool can help you access the data in your VISUAL database. These tools will help you write reports, troubleshoot problems and query various tables within your database. It would be ideal if one tool was the best solution in all cases. However, there are various factors that determine which tool(s) are appropriate for you. Listed below are some of the popular tools that are available and some comments regarding their use with VISUAL

The third type of tools are Administrative Tools. The administrative tools give you the means to assess the health of your database and tune it as necessary. There are two basic types of tools in this group: those that are dependent upon your server operating system (For example, Novell 3.12 or Windows NT 4.0) and those that are dependent upon your database engine (For example, SQLBase or Oracle). We won't provide many details regarding these tools, but it is important that you investigate what options are available to you in this arena.

Implementation Aids

Visio (Visio Corporation)

Visio is a user-friendly, affordable diagramming tool. Visio combines diagramming and mapping capabilities with intuitive and easy to use interface. Visio includes simple to follow tool sets and stencils and is a user-friendly tool for documenting your business processes.

For more information on the Visio product line, visit the Visio web site at <http://www.visio.com>.

Acrobat (Adobe Software)

You can use Acrobat to create “living” documents that you can update throughout the life of the implementation project to track and manage your progress. It is important to continually revisit these documents and refresh them to reflect any changes that are made.

Key Features:

- ☐ Convert any document to PDF.
- ☐ Mark up and annotate PDF documents.
- ☐ Apply security options and digital signatures to PDF documents.
- ☐ Create PDF Web Forms.
- ☐ Integrate PDF forms with Web servers and e-mail.
- ☐ Do late-stage text and image editing on PDF files.
- ☐ Reuse text, graphics, and table data from PDF files.

For more information on the Adobe product line, visit the Adobe web site at <http://www.adobe.com>.

You can take virtually any document (Word, Excel, Visio, ... and distill it into a standardized format. Typically these documents are quite small in size making them very portable.

Project (Microsoft Corporation)

Project is an all inclusive project management software tool. As you read through the project management sections that follow keep in mind that you can use Microsoft Project to track and manage all of these steps.

The biggest complaint about this software is that it's laborious to use and the overhead of learning how to use the software could be better spent doing other project related tasks. The truth in this depends on the scope of your project. However, when you consider the number of projects where budgets sky rocket, users are vastly under trained, tasks get ignored and things generally go poorly there is typically a direct relationship to the amount of time spent related to project management activities. To that end, Microsoft Project is probably the most complete and versatile tool available to develop and manage project plans and assist you in staying on track.

Project can help you manage the individual tasks and their interdependencies as well as produce high level overviews of the project. The tool's flexibility makes it a wonderful utility to manage every aspect of a project and pull together facts and figures for status meetings.

For more information on the Microsoft product line, visit the Microsoft web site at <http://www.microsoft.com>.

Data Access Tools

There are multiple data access tools (products) offered as shown below. For additional information on any of the products or providers, visit the following web sites:

Centura Software - <http://www.centurasoft.com>

Seagate Software - <http://www.seagatesoftware.com>

Microsoft - <http://www.microsoft.com>

Centura Report Builder

Centura Report Builder is a powerful data access and reporting tool for VISUAL databases. Centura Report Builder allows you to define queries, reports, and forms with an easy-to-use graphical interface and point-and-click technology.

Using Centura Report Builder you can:

- ☐ Ensure secure, enterprise-wide data access.
- ☐ Manage SQL tables.
- ☐ Access and manage data definitions in the database.
- ☐ Compose queries or issue commands in SQL to take advantage of the full range of back-end SQL functions.
- ☐ Write your own SQL statements.
- ☐ Create, browse, and edit individual database tables in either local SQL, desktop, or corporate databases.

Advantages:

- ☐ Comes with VISUAL.
- ☐ Easy to use.
- ☐ Fast and direct access to the database – no ODBC connection.
- ☐ Can be used with other data sources via ODBC.

Disadvantages:

- ☐ Can't define runtime criteria.
- ☐ 16 bit application that is not going to be updated.
- ☐ Physical limits to joins.
- ☐ No wizards.
- ☐ Limited sophistication.

Team Developer Report Builder (Centura Software)

Team Developer Report Builder is the tool that is used to create all of the standard VISUAL report files (*.grp's). Report Builder is the only tool you can use to edit these reports. Report Builder has a similar look and feel to Centura Report Builder making the use of both tools advantageous.

Advantages:

- ☐ Comes with VISUAL.
- ☐ Preferred tool for editing reports.
- ☐ Part of Team Builder tools.

Disadvantages:

- ☐ Limited use – only available for editing existing reports.

SQLConsole (Centura Software)

SQL Console is primarily intended to be an administrative tool to monitor and optimize your VISUAL database. However, it can also be an effective tool to import and export data to and from your database.

Advantages:

- ☐ Comes with VISUAL.
- ☐ Quick database access.
- ☐ Easy to use.

Disadvantages:

- ☐ No data manipulation capabilities.
- ☐ Limited to importing and exporting.

Crystal Reports (Seagate Software)

Crystal Reports is a common report building tool that is compatible with a wide variety of databases. Crystal Reports has user friendly wizards available to help guide users through the creation of queries and reports. The wizards make Crystal a good choice for the average user. They are detailed and easy to follow.

Advantages:

- ☐ Excellent wizards.
- ☐ Can define runtime criteria.
- ☐ Can compile reports as *.exe files and distribute to users.

Disadvantages:

- ☐ ODBC connection to the database.
- ☐ Third party package.
- ☐ Potential for query translation inconsistencies.

Access (Microsoft Corporation)

Microsoft Access takes report development tools to a higher level. Access is actually a database management system (DBMS). Access can be used to develop complete database applications. The report creation features within Access are excellent and can be extended into a great variety of database environments. Access has the capability to extract data from VISUAL and import it into data warehouses. Using this capability you can create a reporting environment for users that minimizes the amount of users that need to access your production database during the business day making response time much quicker for the users entering transactions into the database.

Access provides great sophistication and, being a Microsoft product, it's widely supported. If no one in-house has knowledge about any of the tools listed here, Access is a wise choice simply because there are a great number of professionals available with Access skills.

Advantages:

- ☐ Complete database in itself.
- ☐ Wizards available.
- ☐ English-like joins.
- ☐ Very common and widely supported tool.

Disadvantages:

- ☐ ODBC connection.
- ☐ Complex tool – it is more than most end users need.

Centura Team Developer (Centura Software)

Team Developer is the programming language in which VISUAL is written. This program gives the user a comprehensive development environment to develop sophisticated reports and full applications. When used with VISUAL source code, full customization of report front-ends (user interface and query) can take place. Newly created reports and queries can be made available directly from the drop down menus from within VISUAL. This seamless connection is very handy to the average user and eliminates the appearance of using multiple tools to retrieve data.

Advantages:

- ☐ Complete data access tools.
- ☐ Ultimate in flexibility and speed.
- ☐ Handles complex queries well.

Disadvantages:

- ☐ Complex to learn.
- ☐ Expensive.

SQLTalk (Centura Software)

SQLTalk is an SQL based tool that allows the user to create SQL statements to query the VISUAL database tables. Depending on a user's level of system security, he/she can perform a wide variety of functions from viewing data to updating data. For users with an understanding of SQL, this is a great tool to easily access and manipulate data.

Advantages:

- ☐ Comes with VISUAL.
- ☐ Quick database access.

Disadvantages:

- ☐ Requires knowledge of SQL.
- ☐ For users with DBA access there is a risk of easily updating data accidentally.

Administrative Tools

Like we mentioned before there will be a number of options available to you depending on your specific database engine and your server operating system. It will be important to investigate your options and pay close attention to your database performance especially in the months directly after your ‘go-live’ date.

We will offer a brief discussion about the capabilities that SQLConsole offers as an administrative tool as the vast majority of VISUAL installations will use SQLBase as the database engine.

SQLConsole (Centura Software)

SQLConsole is a graphical database administration and monitoring tool for SQLBase servers and databases. SQLConsole lets you easily perform administrative tasks for a local SQLBase server and all of the SQLBase servers that you may be running on your network. SQLConsole offers an easy to use GUI and graphically displays database objects. This makes it easy to view or make changes to your tables, user accounts, stored commands, and other database objects.

To help you fine-tune your system SQLConsole offers statistics windows. The statistics window is a valuable tool for performance tuning because they provide an objective measure of how your system performs over time and under typical conditions.

You can view server and database activity down to the process, cursor, and lock level. You can use this detailed information to detect problems and make tuning decisions.

SQLConsole’s Alarm Manager alerts you when user-defined thresholds for various server conditions are exceeded. The alarm can trigger a predefined action. For example, killing the connection that is causing the alarm condition.

SQLTalk (Centura Software)

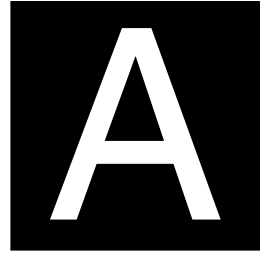
SQLTalk is a command line SQL tool that requires extensive SQL knowledge but will allow low-level control over the database.

Data Access Techniques

Open Database Connectivity (ODBC)

ODBC defines how to move information in and out of any database that supports the standard. ODBC is a standard database access method introduced by Microsoft. The intent is to be able to access data from any software application regardless of the database management system in use. ODBC performs this task by inserting a middle layer of software (a driver) between the application and the database management software. The driver is able to translate the queries of the application's data into commands that the database management system can interpret. For this to work, both the application and the database management system must be "ODBC compliant" In very basic terms, ODBC drivers make it possible to retrieve data from your VISUAL database with tools other than those that came with your database engine (For example, Microsoft Access).

Note: ODBC drivers are provided on your VISUAL CD-ROM.



Appendix A - Implementation Workbook

Sample Files

Sample Forms

This section contains sample forms that are used in the various binders for the implementation. The fictitious company Majestic Manufacturing has been used so you can get an idea how each form should be used.

Tab 1 - Objectives & Goals

 Implementation Workbook	Description: OBJECTIVES		Tab: 1
	Document #: IMP-T1-FORM110	Revision: A	Dated: JAN 1 2001
	Page: 1 of 1	Document Owner (Title & Name): PRESIDENT: DON	

Purpose/Scope:

The purpose of this form is to define and record business oriented objectives and critical success factors that answer the question of why your company is implementing VISUAL Manufacturing. Goals are used to support each objective and critical success factors. Goals must be measurable to be effective. **Critical success factors are those select objectives that are critical or key for the project to be deemed successful.

Related Documents:

IMP-T1-FORM112 Goals

Objectives:

1. TO REDUCE INVENTORY.
2. TO SHIP SALES ORDERS ON TIME.
3. TO REDUCE SALES ORDER DELIVERY TIMES.
4. TO INCORPORATE THROUGHPUT INTO OUR PLANNING PROCESS.
5. TO INCORPORATE CONCURRENT SCHEDULING OF MATERIALS AND RESOURCES.

Once the above list of objectives has been recorded the next step is to determine and select objectives that will become the critical success factors. These further define the essential benefits that the project will deliver.

 Implementation Workbook	Description: GOALS		Tab: 1
	Document #: IMP-T1-FORM112	Revision: A	Dated: JAN 1 2001
	Page: 1 of 1	Document Owner (Title & Name): PRESIDENT: DON	

Purpose/Scope:

The purpose of this form is to define and record goals for each of the project objectives and critical success factors. Goals are used to support each objective and critical success factor. Each goal must be measurable.

Related Documents:

IMP-T1-FORM110 Objectives

Objective or Critical Success Factor:

TO INCORPORATE THROUGHPUT INTO OUR PLANING PROCESS TO INCREASE PROFIT.

Definitions:

PROFIT = TOTAL THROUGHPUT - OPERATING EXPENSE

THROUGHPUT IS THE RATE AT WHICH THE SYSTEM GENERATES MONEY THROUGH SALES. (THROUGHPUT = SELLING PRICE - PURCHASED MATERIALS - OUTSIDE SERVICES)

Goals:

1. TO BE DONE BY OPERATIONS BY XX-XX-XX DATE.

DETERMINE THE THROUGHPUT RATE FOR EVERY PRODUCT OR PRODUCT LINE.

(THROUGHPUT = SELLING PRICE - PURCHASED MATERIALS - OUTSIDE SERVICES)

2. TO BE DONE BY PRODUCTION MANAGER BY XX-XX-XX DATE.

DETERMINE THE INTERNAL RESOURCES NEEDED FOR EACH PRODUCT OR PRODUCT LINE.

MAKE A LIST OF RESOURCES USED PER PRODUCT.

3. TO BE DONE BY PRODUCTION MANAGER & OPERATIONS BY XX-XX-XX DATE.

DETERMINE THE CAPACITY OF EACH INTERNAL RESOURCE. RATE EACH RESOURCES

CAPACITY AS MORE OR LESS THEN NEEDED.

4. TO BE DONE BY MANAGEMENT AND CORE TEAM BY XX-XX-XX DATE.

DETERMINE A PLAN TO INCREASE CAPACITY FOR RESOURCES WITH LESS THEN NEEDED CAPACITY BASED ON A PRODUCTS THROUGHPUT VALUE.

- 5.

Tab 3 - Team Definitions & Contacts

 Implementation Workbook	Description:		Tab:
	TEAM DEFINITION		3
	Document #:	Revision:	Dated:
	IMP-T3-FORM310		A, JAN 1 2001
Page:	Document Owner (Title & Name):		
1 of 1	PRESIDENT: DON		

Purpose/Scope:

The purpose for Team Definitions is to clearly document leadership and involvement. Team Definitions provide representation for organizational lines, department cross-functions, and will identify a champion for each of the objectives.

Related Documents:

IMP-T3-FORM312 Contact List

Steering Committee:

PRESIDENT: DON

Chair

PRESIDENT: DON

BOARD OF DIR.: ROBIN

QUALITY COORDINATOR: JAY

MANUFACTURING ENG.: RAY

CORE TEAM: DAN

Core Team:

DAN

Chair

MANUFACTURING: CHARITY

FINANCIALS: DEB

SYSTEM: DAN

ISO CONSULTANT: RUSS

VISUAL CONSULTANT: PETER

Manufacturing Team:

CHARITY

Chair

PRODUCTION: CHARITY

INVENTORY: CARMEN

PURCHASING: DIANNE

Financial Team:

DEB

Chair

CONTROLLER: DEB

ASSISTANT: YVETTE

Systems Team:

DAN

Chair

SYSTEM OPERATIONS: DAN

SUPPORT: JAY

OUTSIDE SUPPORT: FRANZ

Tab 4 - Team Meeting Notes

 Implementation Workbook	Description: TEAM MEETING NOTES		Tab: 4
	Document #:	Revision:	Dated:
	IMP-T4-FORM410		A, JAN 1 2001
	Page: 1 of 1	Document Owner (Title & Name): ACCOUNTING - DEB	

Purpose/Scope:

This form provides three important functions. Recording the meeting events for follow-up discussion and to help determine the actions to be taken. Also used to preserve the knowledge base generated by team meetings via written notes. Appoint a scribe to take notes and distribute to all team members after each meeting.

Related Documents:

IMP-T4-FORM412 Brainstorming worksheet
 IMP-T4-FORM414 Force Field Analysis
 IMP-T4-FORM416 Cause and Effect Diagram

Team: FINANCIALS Location: CONFERENCE ROOM, JAN 2 2001

Purpose: DETERMINE COSTING METHOD TO BE USED.

Attendees: DON, DEB, DAN DON - COPIED TO EACH ON SAME DAY.

Absent: _____

Notes/Follow-up:

METHODS: ACTUAL COSTING VS. STANDARD COSTING.

CURRENT METHOD IS ACTUAL COSTING, - ONLY OPTION ON CURRENT (OLD) SYSTEM.

REFERENCE FORCE FIELD ANALYSIS FORMS ATTACHED.

FOLLOW-UP:

DEB TO BENCHMARK WITH 3 REFERENCES ON BEST METHODS BY NEXT WEEK.

● BANK'S SMALL BUSINESS OFFICE.

● MINNESOTA'S SMALL BUSINESS OFFICE.

● ONE CUSTOMER - YOUR CHOICE.

DAN TO REVIEW INVENTORY EFFECTS UNDER EACH METHOD.

 Implementation Workbook	Description:		Tab:
	FORCE FIELD ANALYSIS		4
	Document #:	Revision:	Dated:
	IMP-T4-FORM414		A, JAN 9 2001
Page:	Document Owner (Title & Name):		
1 of 1	ACCOUNTING - DEB		

Purpose/Scope:

This worksheet is used to help resolve a conflicting decision to be made by recording driving and restraining forces or pros and cons of any given topic. This will also preserve the meeting knowledge and allow you to recall the discussion that resulted in any given decision.

Related Documents:

IMP-T4-FORM410 Team Meeting Notes

Topic: DETERMINE IF ACTUAL* COSTING IS TO BE USED.

DRIVING FORCES	RESTRAINING FORCES
<u>ACTUAL COSTING IS REAL \$'S</u> →	← <u>CURRENT IS STANDARD COSTING.</u>
<u>BANK RECOMMENDS ACTUAL.</u> →	← <u>TO SWITCH WILL ADD TIME.</u>
<u>MSB RECOMMENDS ACTUAL.</u> →	← <u>TRAINING.</u>
→	←
→	←
→	←
→	←
→	←

Tab 5 - Current Business Processes (before VISUAL)

 Implementation Workbook	Description:		Tab:
	CURRENT BUSINESS PROCESSES		5
	Document #:	Revision:	Dated:
	IMP-T5-FORM510		A, Jan 3 2001
Page:	Document Owner (Title & Name):		
1 of 1	CORE TEAM: DAN, CHARITY, DEB		

Purpose/Scope:

This document lists the current business process models as they exist before any implementation effort is taken. Current business processes are also referred to as Reference Models. It is very important to understand current processes even if they are not optimum. Documentation of current processes allows you to study the effects of a proposed process change before making changes.

Related Documents:

IMP-T5-FORM512 Current Business Model

SCENARIO #	DESCRIPTION	ASSIGNED TO
Flow-10	QUOTING & ESTIMATING	SALES, NICK
Flow-12	CUSTOMER ORDER ENTRY	SALES, NICK
Flow-14	ENGINEERING DESIGN	ENG. MGR. RAY
Flow-16	PRODUCTION SCHEDULING	OPERATIONS, DAN
Flow-18	PURCHASING - RECEIVING	BUYER, DIANNE
Flow-20	INVENTORY CONTROL	CARMEN
Flow-22	MANUFACTURING / SHOP FLOOR CONTROL	PRODUCTION, CHARITY
Flow-24	SHIPPING	DOCK, CARMEN
Flow-26	ACCOUNTING	CONTROLLER, DEB

Tab 6 - Training Key Resources

 Implementation Workbook	Description:		Tab:
	TRAINING REQUIREMENTS		6
	Document #:	Revision:	Dated:
	IMP-T6-FORM610	A, JAN 5 2001	
Page:	Document Owner (Title & Name):		
1 of 1	TRAINING COORDINATOR, SUE		

Purpose/Scope:

This form is dedicated to be the one place for all training requirements during the implementation period. Be sure to focus this section on learning requirements. After the implementation phase the "Continuing Education" section of the "Standard Operating Procedures" will provide for professional growth as well as cross training of backup personnel.

Related Documents:

IMP-T6-FORM612 Training Notes

SOP-T8-FORM810 Continuing Education

CLASS TITLE	WHO TO SEND	DATE TO TAKE
System		
System Administration for SQLBase	DAN	1-6-01
System Administration for Oracle	NOT USED	N/A
Standard Report Customization	JAY	1-6-01
Advanced Report Writing	JAY	1-10-01
SQL Basics		
Centura Team Developer Programming		
VISUAL Manufacturing		
Manufacturing Basics	CHARITY, DAN	1-8-01
Manufacturing Window	CHARITY, RAY	1-10-01
Inventory Management	CARMEN	1-6-01
Job and Inventory Costing	DAN, DEB	1-12-01
Advanced Planning and Scheduling		
VISUAL Messages	JAY, DAN	1-14-01
VISUAL Financials		
Financials Basics	DEB, YVETTE	1-8-01
Financial Auditing	DEB	1-10-01
International Finance & Multi-Entity Report	DEB, SUE	1-14-01
VISUAL Payroll and Human Resources		
VISUAL MPC-PE Parametric Configurator	NOT USED	N/A

Tab 9 - Revised Business Processes (with VISUAL)

 Implementation Workbook	Description:		Tab:
	REVISED MODEL FRAME		9
	Document #:	Revision:	Dated:
	IMP-T9-FORM910		JAN 10 2001
Page:	Document Owner (Title & Name):		
1 of 1	TRAINING COORDINATOR, SUE		

Purpose/Scope:

This document lists the revised models of the business processes, as you want them to exist after the implementation effort. The revised business processes are also referred to as Solution Models. It is important to work with these revised processes in combination with the current processes and understand or study the effect and impact of the proposed changes. Provided in the "Standard Operating Procedures" are 9 "Process Flow charts" that detail VISUAL process flows.

Related Documents:

IMP-T9-FORM912 Revised Business Model
SOP-T2-DOC210 to DOC226 VISUAL Flow Charts

SCENARIO #	DESCRIPTION	ASSIGNED TO
SOP-T2-DOC210	QUOTING & ESTIMATING	SALES, NICK
SOP-T2-DOC212	CUSTOMER ORDER ENTRY	SALES, NICK
SOP-T2-DOC214	ENGINEERING DESIGN	ENG. MGR. RAY
SOP-T2-DOC216	PRODUCTION SCHEDULING	OPERATIONS, DAN
SOP-T2-DOC218	PURCHASING - RECEIVING	BUYER, DIANNE
SOP-T2-DOC220	INVENTORY CONTROL	CARMEN
SOP-T2-DOC222	MANUFACTURING / SHOP FLOOR CONTROL	PRODUCTION, CHARITY
SOP-T2-DOC224	SHIPPING	DOCK, CARMEN
SOP-T2-DOC226	ACCOUNTING	CONTROLLER, DEB

Tab 10 - Open Issues & Report Changes

 Implementation Workbook	Description:		Tab:
	OPEN ISSUE LOG		10
	Document #:	Revision:	Dated:
	IMP-T10-FORM1010		DRAFT, JAN 12 2001
Page:	Document Owner (Title & Name):		
1 of 1	CORE TEAM LEADER, DAN		

Purpose/Scope:

This form provides a single location to maintain, track, and prioritize open issues. The core team reviews and correlates open issues, including logging and prioritizing on this log sheet. The Check Sheet Pad is then given out to determine frequency of occurrence and to substantiate priorities.

Related Documents:

IMP-T10-FORM1012
TK-PAD10
TK-PAD20

Open Issue Form
Check Sheet Pad
Problem Report Pad

DATE OPENED	PRIORITY	OPEN ISSUE SUMMARY & COMMENTS	ORIGINATOR	RESPONSIBLE	DATE CLOSED
1/3/01	D	DIANNE'S PC LOCKS UP.	DIANNE	DAN	
1/4/01	B	INSTALL SERVER PTF	JAY	DAN	1/4/01
1/4/01	A	PRESIDENTS LAPTOP, RUNTIME ERROR	DON	JAY	1/4/01
1/5/01	E	SHIPPING PRINTER GIVES PRINT ERROR, NEEDS NEW DRIVERS	CARMEN	JAY	1/5/01
1/5/01	C	INSTALL VISUAL FOR ACCOUNTING DEPT.	DEB	DAN	

Tab 11 - Company Glossary

VISUAL <i>Manufacturing</i>[®] Implementation Workbook	Description: COMPANY GLOSSARY		Tab: 11
	Document #: IMP-T11-FORM1110	Revision:	Dated:
	Page: 1 of 1	Document Owner (Title & Name): <i>QUALITY COORDINATOR, KIETH</i>	

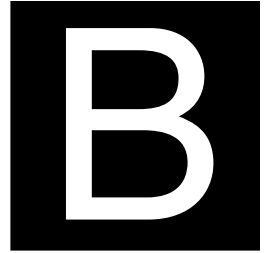
Purpose/Scope:

The purpose of this Company Glossary is to list terms that are unique to your business or organization. When developing process documentation and procedures it is very important to use consistent terms and to ensure that all personnel have the same understanding of their meaning. When possible reference industry standard term definitions like the "APICS Dictionary".

Related Documents:

- APICS Dictionary
- CAN/CSA-ISO 8402-94 Definitions

TERM	DEFINITION	MEANING
OBJECTIVE EVIDENCE	INFORMATION WHICH CAN BE PROVED TRUE, BASED ON FACTS OBTAINED THROUGH OBSERVATION, MEASUREMENT, TEST OR OTHER MEANS.	A PROVEN FACT.
SUBCONTRACTOR	THE COMPANY SUPPLYING PRODUCT OR SERVICE TO MAJESTIC MANUFACTURING.	ALSO CALLED VENDOR
VERIFICATION	CONFIRMATION BY EXAMINATION AND PROVISION OF OBJECTIVE EVIDENCE THAT SPECIFIED REQUIREMENTS HAVE BEEN FULFILLED. [ISO 8402]	WORKS IN SIMULATION OF APPLICATION ENVIRONMENT.
VALIDATION	CONFIRMATION BY EXAMINATION AND PREVISION OF OBJECTIVE EVIDENCE THAT THE PARTICULAR REQUIREMENTS FOR A SPECIFIC INTENDED USE ARE FULFILLED. [ISO 8402]	WORKS AS DESIGNED AT A CUSTOMER'S SIGHT. {CUSTOMER BETA TEST}
CAMPAIGN	A GROUP OF LITERATURE SENT FOR CUSTOMER INFORMATION.	MAILING PACKET.



Appendix B - Information System Documentation Forms

Information System Documentation Forms

Tab 1 - Network Configuration

 INFORMATION SYSTEM DOCUMENTATION	Description:		Tab:
	NETWORK CONFIGURATION		1
	Document #:	Revision:	Dated:
	SYS-T1-FORM110		A, JAN 3 2001
Page:	Document Owner (Title & Name):		
1 of 2	IT - SUPERVISOR, ANDY NETWORKS		

Revision History	Description of Changes	Approving Owner	Date
A	ORIGINAL COMPILATION	ANDY N.	1/3/01

Purpose/Scope:

This form is used to record the working network configuration. Each time the network is revised or changed this document is to be updated by the owner. The document can also be used for cross training.

Related Documents:

SYS-T2-FORM210 Server Configuration

SYS-T3-FORM310 Client Configuration

LOCAL AREA NETWORK	
Ethernet: <i>FRONT OFFICE PRINTERS</i>	Fast Ethernet: <i>FRONT OFFICE CLIENTS</i>
Token Ring: <i>WAREHOUSE CLIENTS</i>	Other: <i>INVENTORY ROLLING CART HAS 1 RF NETWORK CARD</i>

WIDE AREA NETWORK	
Dialup: <i>5 MCI ACCOUNTS FOR SALES DEPT.</i>	Least Lines: <i>TI VIA MCI WORLDWIDE, CONTRACT # 123456</i>
Switched Lines: <i>NONE</i>	Other: <i>WEB SITE HOSTED BY MCI</i>

PROTOCOL	
TCP/IP: <i>FRONT OFFICE</i>	IPS/XPS: <i>WAREHOUSE & INVENTORY CART</i>
NetBEUI: <i>ENGINEERING DEPT FOR PLOTTER SHARING</i>	Other: <i>LAPLINK USED BY SALES</i>

 INFORMATION SYSTEM DOCUMENTATION	Description: NETWORK CONFIGURATION		Tab: 1
	Document #: SYS-T1-FORM110	Revision: <i>A</i>	Dated: <i>JAN 3 2001</i>
	Page: 2 of 2	Document Owner (Title & Name): <i>IT - SUPERVISOR, ANDY NETWORKS</i>	

CABLING	
Cat 5: <i>FRONT OFFICE CLIENTS</i>	10BaseT (Twisted Pair): <i>OFFICE PRINTERS</i>
Fiber Optic: <i>WAN ONLY</i>	10Base2 (Coax): <i>WAREHOUSE</i>
Wireless: <i>INVENTORY ROLLING CART</i>	Other: <i>LAPLINK CABLES USED BY SALES</i>

HUBS	
Hub # 1: <i>INTEL EXPRESS 140T 16 PORT (MFG AREA)</i>	Hub # 2: <i>3COM EXTRA 8 PORT (WAREHOUSE)</i>
Hub # 3: <i>HP 10/100 DIRECT 12 PORT (FRONT OFFICE)</i>	Hub # 4: <i>HP JET DIRECT 3 PORT (FRONT OFFICE PRINTERS)</i>

SWITCHES	
Switch # 1: <i>INTEL EXPRESS 510T 24 PORT (OFFICE & ENGINEERING)</i>	Switch # 2: <i>INTEL EXPRESS 150T (WAREHOUSE)</i>
Switch # 3:	Switch # 4:

ROUTERS	
Router # 1: <i>INTEL EXPRESS - FRAME RELAY (WAN / ISP)</i>	Router # 2: <i>3COM SUPRA</i>
Router # 3:	Router # 4:

Tab 2 - Server Configuration

 INFORMATION SYSTEM DOCUMENTATION	Description:		Tab:
	SERVER CONFIGURATION		2
	Document #:	Revision:	Dated:
	SYS-T2-FORM210	<i>A. JAN 4 2001</i>	
Page:	Document Owner (Title & Name):		
1 of 2	<i>IT - SUPERVISOR, ANDY NETWORKS</i>		

Revision History	Description of Changes	Approving Owner	Date
<i>A</i>	<i>ORIGINAL COMPILATION</i>	<i>ANDY N.</i>	<i>1/4/01</i>

Purpose/Scope:

This form is used to record the working server ('s) configuration. Use one from each server if you have more than one server. Each time the server is revised or changed this document is to be updated by the owner. This document can also be used for cross training.

Related Documents:

SYS-T1-FORM110 Network Configuration

SYS-T3-FORM310 Client Configuration

HARDWARE	
Brand: <i>COMPAQ PROLIANT 1600</i>	Processor(s): <i>(2) PENTIUM III 500</i>
Memory: <i>512MB 10NS SDRAM</i>	Hard Drive(s): <i>(4) SEAGATE CHEETAH 8GIG U/W/F SCSI</i>
HDD Controller(s): <i>(2) ADAPTEC AHA-2940</i>	HDD Controller(s): <i>(2) ADAPTEC AHA-2940 UW/F</i>
Backup System(s): <i>HP DAT DDS-3 WITH AUTOLOADER</i>	Network Card(s): <i>(2) INTEL PRO 100 INTELLIGENT SERVER PCI</i>
CD Drive(s): <i>MEMOREX CDRW-2216</i>	Modem(s): <i>U.S. ROBOTICS 56K</i>
Internet Gateway (ISP): <i>MCI WORLDCOM</i>	IP Address/Subnet Mask: <i>123.456.78.90</i>
Video: <i>DIAMOND VIPER 770</i>	Monitor : <i>GATEWAY 2000 VIVITRON</i>
UPS: <i>APC SMART-UPS 3000NET</i>	Other Hardware: <i>NATURAL WIN95 KEYBOARD, 3-1/2" LS-120 SUPPER DRIVE, MOUSE</i>

 INFORMATION SYSTEM DOCUMENTATION	Description: SERVER CONFIGURATION		Tab: 2
	Document #: SYS-T2-FORM210	Revision: <i>A, Jan 4 2001</i>	Dated:
	Page: 2 of 2	Document Owner (Title & Name): <i>IT - SUPERVISOR, ANDY NETWORKS</i>	

OPERATING SYSTEM	
Brand: <i>NOVELL</i>	Version & Patch Level: <i>NETWARE 5, SP-1</i>
Administrative Login / Password: <i>SUPERVISOR / G04BR0KE</i> <i>ANDYN / SPACe2LeT (SUPE EQUIV)</i>	Number Of Licensed Users: <i>100</i>
Frame Type: <i>ETHERNET_II</i>	Backup Software & Version: <i>SEAGATE SOFTWARE BACKUP EXEC V8</i>
Print Queue(s): <i>XEROX = XEROX DocuPRINT N40</i>	Other Software: <i>SOPHOS ANTI-VIRUS FOR NETWARE</i>

REDUNDANT HARDWARE	
Brand: <i>HP SURESTORE CD-ROM TOWER</i> <i>WITH (7) 32X DRIVES</i>	Processor(s): <i>N/A</i>
Memory: <i>N/A</i>	Hard Drive(s): <i>N/A</i>
Backup System(s): <i>N/A</i>	Network Card(s): <i>INTEGRATED RJ-45 CONNECTOR</i> <i>(10BASE2)</i>

Tab 3 - Client Configuration

 INFORMATION SYSTEM DOCUMENTATION	Description: <i>ENG. MARK K's.</i>		Tab: 3
	SERVER CONFIGURATION		
	Document #: SYS-T3-FORM310	Revision: <i>A</i>	Dated: JAN 5 2001
Page: 1 of 2	Document Owner (Title & Name): <i>IT - SUPERVISOR, ANDY NETWORKS</i>		

Revision History	Description of Changes	Approving Owner	Date
<i>A</i>	<i>ORIGINAL COMPILATION</i>	<i>ANDY N.</i>	<i>1/5/01</i>

Purpose/Scope:

This form is used to record each workstation or group type configuration. Each time the workstation is revised or changed this document is to be updated by the service owner. This document can be very useful for technical support and licensing information.

Related Documents:

SYS-T1-FORM110 Network Configuration

SYS-T2-FORM210 Server Configuration

HARDWARE	
Brand: <i>DELL POWER-EDGE</i>	Processor: <i>PII - 300</i>
Memory: <i>128 MB 10ns SDRAM</i>	Hard Drive(s): <i>1-WESTERN DIGITAL 6.4GIG</i>
Network Card: <i>INTEL PRO/100 PCI</i>	Modem: <i>U.S. ROBOTICS 33.3</i>
Mouse / Pointer: <i>MS SERIAL WITH ROLLER</i>	Keyboard: <i>MS NATURAL 104-KEY</i>
IP Address/Subnet Mask: <i>192.168.2.22</i>	Other Hardware: <i>OMEGA ZIP 250</i>
Other Hardware: <i>CANON BJC-4000 (LPT1)</i>	Other Hardware: <i>HOUSTON INSTRUMENTS DMP-56A PLOTTER (COM1)</i>

ENVIRONMENT	
Path Statement: <i>C:\VISUAL\RUNTIME; C:\VISUAL\SQLBASE</i>	Drive Mappings: <i>Y:\APPS\AUTOCAD Z:\VMFG</i>
VISUAL Shortcuts On Desktop: <i>VISUAL MFG. & QUEST</i>	VISUAL Shortcuts In Start Menu: <i>VISUAL FOLDER: VMFG & DEMO</i>

 INFORMATION SYSTEM DOCUMENTATION	Description: <i>ENG. MARK K's.</i>		Tab: 3
	SERVER CONFIGURATION		
	Document #:	Revision:	Dated:
	SYS-T3-FORM310		<i>A. JAN 5 2001</i>
Page:	Document Owner (Title & Name):		
2 of 2	<i>IT - SUPERVISOR, ANDY NETWORKS</i>		

OPERATING SYSTEM

Brand: <i>MICROSOFT NT</i>	Version / Service Pack: <i>NT4 SP4; DATA COMPONENTS SP2</i>
Primary User Login: <i>MARK</i>	Primary User Password: <i>WAIT4ME</i>

VISUAL COMPONENTS

Centura Runtime: <i>C:\VISUAL\RUNTIME</i>	Database Client: <i>C:\VISUAL\SQLBASE</i>
Visual Executables: <i>Z:\VMFG</i>	Forecast Pro: <i>Z:\VISUAL\FPRO</i>
Forest And Trees: <i>Z:\FTW4ADL</i>	Executive Link: <i>Z:\VMFG_EIL</i>
Quest: <i>C:\VISUAL\QUEST</i>	Quest Reporter: <i>C:\VISUAL\QUESTR</i>
Centura Report Windows: <i>C:\CENTURA\REPORT_W</i>	Centura Team Developer: <i>C:\CENTURA\CTD</i>
Centura Object Nationalizer: <i>C:\CENTURA\OBJECT_N</i>	SQL Console: <i>C:\VISUAL\SQLCON</i>
Online Documents: <i>Z:\VISUAL\ONLINE DOCUMENTS</i>	Master Documents: <i>Z:\VISUAL\MASTER DOCUMENTS</i>

THIRD PARTY SOFTWARE

Office Suite: <i>MS OFFICE 97 SP2</i>	Crystal Reports:
E-Mail Client: <i>OUTLOOK EXPRESS V4.72</i>	Internet Browser & Version: <i>INTERNET EXPLORER 5</i>
Virus Software: <i>MCAFFEE & NORTON</i>	Acrobat Reader: <i>FULL ACRBAT 4.0</i>
Other Software: <i>MS PROJECT V4</i>	Other Software: <i>V-LAUNCHER 2.0 (WWW.VIRANT.COM)</i>

Tab 4 - Front End Software

 INFORMATION SYSTEM DOCUMENTATION	Description: VISUAL MANUFACTURING FRONT-END CONFIGURATION		Tab: 4
	Document #: SYS-T4-FORM410		Revision: Dated: A, JAN 6 2001
	Page: 1 of 2	Document Owner (Title & Name): IT - SUPERVISOR, ANDY NETWORKS	

Revision History	Description of Changes	Approving Owner	Date
A	ORIGINAL COMPILATION	ANDY N.	1/6/01

Purpose/Scope:

This form is used to record VISUAL Manufacturing module(s) configuration. Each time a module is updated this document is to be revised by the owner. This document is useful for technical support and troubleshooting.

Related Documents:

SYS-T5-FORM510 Back End Documentation

PRIMARY VISUAL EXECUTABLES	
Version: 5.2.2	Location: SERVER MMC-1, VISUAL\

MASTER PRODUCT CONFIGURATOR	
Version/PTF: 4.4.8	Location: VISUAL\MPG

MATERIAL RESOURCE PLANNING (MRP)	
Version/PTF: 4.4.8	Location: VISUAL\MRP

VISUAL QUALITY	
Version/PTF: 2.0	Location: VISUAL\VMFG

PAYROLL	
Version/PTF: 3.2	Location: VISUAL\PAYROLL

 INFORMATION SYSTEM DOCUMENTATION	Description: VISUAL MANUFACTURING FRONT-END CONFIGURATION		Tab: 4
	Document #: SYS-T4-FORM410	Revision: Dated: A, JAN 6 2001	
	Page: 2 of 2	Document Owner (Title & Name): IT - SUPERVISOR, ANDY NETWORKS	

HUMAN RESOURCES

Version: 1.0	Location: VISUAL\HR
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EXECUTIVE INFORMATION SYSTEM

Version/PTF: 6.9	Location: VISUAL\VMFG_EIL
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TECHNICAL ESTIMATING

Version/PTF: V3.2, PTF 2	Location: VISUAL\TECH_EST
---------------------------------	----------------------------------

QUEST

Version/PTF: V3.03, PTF 6	Location: (ON CLIENT) C:\VISUAL\QUEST
----------------------------------	--

QUEST REPORTER

Version/PTF: V3.03, PTF 6	Location: (ON CLIENT) C:\VISUAL\QUESTR
----------------------------------	---

QUEST

Version/PTF: V6.1.2, PTF 11	Location: (ON CLIENT) C:\VISUAL\SQLCON
------------------------------------	---

Tab 5 - Back End Software

 INFORMATION SYSTEM DOCUMENTATION	Description: VISUAL MANUFACTURING BACK-END CONFIGURATION	Tab: 5
	Document #: SYS-T5-FORM510	Revision: A Dated: JAN 6 2001
	Page: 1 of 1	Document Owner (Title & Name): IT - SUPERVISOR, ANDY NETWORKS

Revision History	Description of Changes	Approving Owner	Date
A	ORIGINAL COMPILATION	ANDY N.	1/6/01

Purpose/Scope:

This form is used to record the VISUAL Manufacturing module(s) back end configuration. Each time a module is updated this document must be revised by the owner. This document is useful for technical support and troubleshooting.

Related Documents:

SYS-T4-FORM410 Front End Documentation

DATABASE ENGINE	
Brand: <i>CENTURA SQLBASE</i>	Version / PTF: <i>6.1.2 PTF 11</i>
Number of Licensed Users: <i>15</i>	Location: <i>SERVER MMC-1, VISUAL\SQLBASE</i>
Database Serial Number: <i>12345678-1234-567-1234567890</i>	SYSADM ID & Password: <i>SYSADM / TG-BYHN</i>
Server Name: <i>SERVER1</i>	Network Address/Subnet Mask: <i>192.168.2.1</i>
NOTE: ATTACH A COPY OF THE SQL.INI TO THIS FORM	

CENTURA RUNTIME COMPONENTS	
Version / PTF: <i>V1.1.2 PTF 6</i>	Location: <i>(ON CLIENT) C:\VISUAL\RUNTIME</i>

DATABASE CLIENT COMPONENTS	
Version / PTF: <i>V2.1.2 PTF 11</i>	Location: <i>(ON CLIENT) C:\VISUAL\SQLBASE</i>

Tab 6 - Lilly Software Associate Correspondence

 INFORMATION SYSTEM DOCUMENTATION	Description: LILLY SOFTWARE ASSOCIATES CORRESPONDENCE		Tab: 6
	Document #:	Revision:	Dated:
	SYS-T6-FORM610		<i>A, JAN 6 2001</i>
Page:	Document Owner (Title & Name):		
1 of 2	<i>CORE TEAM LEADER, DAN M.</i>		

Revision History	Description of Changes	Approving Owner	Date
A	ORIGINAL COMPILATION	DAN M.	1/6/01

Purpose/Scope:

This form is used to list all Lilly Software Associates contacts. Important contacts and events should be indexed on the attached index page and placed within this tab. This will provide an accurate history of past correspondence.

Related Documents:

SYS-T7-Form710 Computer Support Correspondence

SYS-T8-Form810 Other Correspondence

NAME/TITLE & DESCRIPTION	PHONE	E-MAIL
LSA Corporate: <i>HTTP://WWW.LILLYSOFTWARE.COM</i>	Ph: <i>603-926-9696</i> Fax: <i>603-926-9698</i>	<i>SALES@LILLYSOFTWARE.COM</i>
LSA Support: <i>HTTP://SUPPORT.VISUALMFG.COM</i> Login Name: <i>MMCOOL</i> Password: <i>No1</i>	Ph: <i>603-929-9009</i> Fax: <i>603-926-0813</i>	<i>SUPPORT@LILLYSOFTWARE.COM</i>
Local Associate (General Contact):	Ph: Fax:	
Local Associate (Manufacturing Contact):	Ph: Fax:	
Local Associate (Financials Contact):	Ph: Fax:	
Local Associate (Systems Contact):	Ph: Fax:	
Local User Group:	Ph: Fax:	
International User Group:	Ph: Fax:	

Tab 7 - Computer Support Correspondence

 INFORMATION SYSTEM DOCUMENTATION	Description: COMPUTER SUPPORT CORRESPONDENCE		Tab: 7
	Document #:	Revision:	Dated:
	SYS-T7-FORM710		A. JAN 3 2001
Page:	Document Owner (Title & Name):		
1 of 2	IT-SUPERVISOR, ANDY NETWORKS		

Revision History	Description of Changes	Approving Owner	Date
A	ORIGINAL COMPILATION	ANDY N.	1/3/01

Purpose/Scope:

This form is used to list all computer support contacts. Important contacts and events should be indexed on the attached index page and placed within this tab. This will provide an accurate history of past correspondence.

Related Documents:

SYS-T6-Form610 Lilly Software Associate Correspondence

SYS-T8-Form810 Other Correspondence

Record your company's computer support contract name and number here

Contact Name: _____ Contract #: _____

NAME/TITLE & DESCRIPTION	PHONE	E-MAIL
General Computer Support: <i>FRANZ</i>	Ph: <i>651-456-7811</i> Fax:	<i>GURU@CPU.COM</i>
Server Support: <i>CENTURA</i>	Ph: <i>321-654-8711</i> Fax:	<i>WWW.CENTURASOFT.COM</i>
Network Support: <i>NOVELL</i>	Ph: <i>800-080-0110</i> Fax:	<i>WWW.NOVELL.COM</i>
Internet Service Provider: <i>ISP SOLUTIONS</i>	Ph: <i>888-258-9511</i> Fax:	<i>WWW.ISP.NET</i>
Microsoft:	Ph: Fax:	
Database Engine Supplier:	Ph: Fax:	

 INFORMATION SYSTEM DOCUMENTATION	Description: COMPUTER SUPPORT CORRESPONDENCE		Tab: 7
	Document #:	Revision:	Dated:
	SYS-T7-FORM710		<i>A, JAN 3 2001</i>
Page:	Document Owner (Title & Name):		
2 of 2	<i>IT-SUPERVISOR, ANDY NETWORKS</i>		

[illegible]

Tab 8 - Other Correspondence

 INFORMATION SYSTEM DOCUMENTATION	Description: OTHER CORRESPONDENCE		Tab: 8
	Document #:	Revision:	Dated:
	SYS-T8-FORM810	<i>A.</i>	<i>JAN 4 2001</i>
Page:	Document Owner (Title & Name):		
1 of 2	<i>OPERATIONS DAN M.</i>		

Revision History	Description of Changes	Approving Owner	Date
A	ORIGINAL COMPILATION	DAN M.	1/4/01

Purpose/Scope:

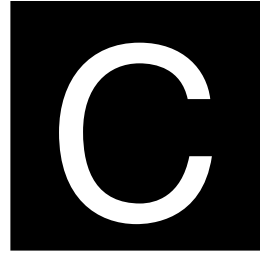
This form is used to list all other support contacts required to operate your business. Important contacts and events should be indexed on the attached index page and placed within this tab. This will provide an accurate history of past correspondence.

Related Documents:

SYS-T6-Form610 Lilly Software Associate Correspondence
 SYS-T7-Form710 Computer Support Correspondence

NAME/TITLE & DESCRIPTION	PHONE	E-MAIL
Building Owner: <i>TRUMP CORP.</i>	Ph: <i>800-951-7531</i> Fax:	<i>BILLING@TRUMP.COM</i>
Building Maintenance: <i>WE CAN FIX IT GROUP</i>	Ph: <i>484-7788</i> Fax:	<i>HELP@FIXIT.COM</i>
Telephone System Support: <i>COMMUNICATIONS INC.</i>	Ph: <i>612-787-9456</i> Fax:	<i>WWW.PHONEHOME.COM</i>
Telephone Company: <i>US-PHONES</i>	Ph: <i>555-444-3333</i> Fax:	<i>BILLING@USTEL.NET</i>
City Utilities Department: <i>HAPPY VALLEY</i>	Ph: <i>651-222-1254</i> Fax:	<i>N/A</i>
Gas Company: <i>MANY-GASSES</i>	Ph: <i>321-123-4568</i> Fax:	<i>HELP@SMELL.ORG</i>
Security Company: <i>KEEP IT YOURS, INC.</i>	Ph: <i>456-888-1111</i> Fax:	<i>KEEP@LOCKUP.COM</i>
Environmental Services:	Ph: Fax:	

[illegible]



Appendix C - Data and Menu Paths

Data and Menu Path Table:

Accounts Payable Disbursements - From the main VMFG window:

Payables\Payment Entry

Accounts Payable Vouchers - From the main VMFG window:

Payables\Invoice Entry

Accounts Receivable Invoices - From the main VMFG window:

Receivables\Invoice Entry

Accounts Receivables Cash Receipts - From the main VMFG window:

Receivables\Cash Application

Allocations - From the Accounting window:

Maintain\Allocations...

Alternate Industry Codes - From the Application Global Maintenance window:

Maintain\AIC Table...

Bank Accounts - From the main VMFG window:

Cash\Bank Account Maintenance

Bills of Lading - From the Shipping Entry window:

File\Print Bills of Lading...

Bills of Manufacturing - From the main VMFG window:

Eng/Mfg\Manufacturing Window

Budget - From the main VMFG window:

Ledger\Budget Maintenance

Calendar Exceptions, Global - From the Application Global Maintenance window:

Maintain\Calendar Exceptions...

Calendar Exceptions, Specific - From the Concurrent Scheduler window:

File\Calendar Exceptions...

Carriers - From the Application Global Maintenance window:

Maintain\Carriers...

Cash Book - From the main VMFG window:

Cash\Cash Book

Cash Management - From the main VMFG window:

Cash\Cash Management Window

Chart of Accounts - From the Accounting window:

Info\Chart of Accounts (indented)

Info\Chart of Accounts (next level)

Collections - From the Invoice Entry window:

Info\Collections...

Commission Sharing - From the Order Management or Customer Order Entry windows:

Edit\Commission Sharing...

Commodity Codes - From the Application Global Maintenance window:

Maintain\Commodity Table...

From the Part maintenance window:

Maintain\Commodity Codes...

Contacts, Alternate Customer - From the Customer Maintenance window:

Maintain\Alternate Contacts...

Contacts, Alternate Vendor - From the Vendor Maintenance window:

Maintain\Alternate Contacts...

Credit Memorandum - From the main VMFG window:

Receivables\Invoice Forms

Currencies - From the Currency Exchange Rate Maintenance window:

Edit\Currency Maintenance

Currency Exchange Rates - From the main VMFG window:

Ledger\Currency Exchange Rate Maintenance

Currency Hedging - From the Customer Order Entry, Purchase Order Entry, Invoice Entry, Payment Entry, Cash Application, and General Journal Entry windows:

Edit\Set/Reset Exchange Rates...

Customer Forecasts (button) - From the Material Planning window:

File\Master Production Schedule...\Customer Forecasts...(button)

Customer Order Acknowledgement Codes - From the Application Global Maintenance window:

Maintain\CO Acknowledgement Codes...

Customer Orders - From the main VMFG window:

Sales\Customer Order Entry

Customers - From the main VMFG window:

Sales\Customer Maintenance

Discount Code - From the Customer Maintenance window:

Maintain\Discount Codes...

Earning Codes - From the Employee Maintenance window:

Edit\Earning Codes...

Edit Customer Forecasts (button) - From the Material Planning window:

File\Master Production Schedule...\Customer Forecasts...(button)\Edit Customer Forecasts(button)

Employee Maintenance - From the main VMFG window:

Admin\Employee Maintenance

Entity - From the Ledger Application Global Maintenance window:

Maintain\Entity...

Estimates\Quotes - From the main VMFG window:

Eng/Mfg\Estimating Window

Export Formats - From the Application Global Maintenance window:

Maintain\Export Formats...

Financial Calendar - From the Ledger Application Global Maintenance window:

Maintain\Calendar...

Free On Board - From the Application Global Maintenance window:

Maintain\FOB Table...

General Ledger Account Balances - From the main VMFG window:

Ledger\General Journal Entry

General Ledger Consolidation - From the main VMFG window:

Ledger\Consolidation

General Ledger Revaluation - From the main VMFG window:

Ledger\Revaluation Entry

Hold Reasons - From the Part Maintenance window:

Maintain\Hold Reasons...

Indirect Codes - From the Employee Maintenance window:

Edit\Indirect Codes...

Initialize Physical Count - From the Physical Inventory Count window:

File\Initialize Physical Inventory Count

Inter Branch Transfer- From the main VMFG window:

Inventory\Inter Branch Xfer Entry

Inter Branch Transfer Receipts Entry - From the main VMFG window:

Inventory\Inter Branch Xfer Receipts Entry

Inter Branch Transfer Shipping Entry - From the main VMFG window:

Inventory\Inter Branch Xfer Shipping Entry

Inventory Transactions - From the main VMFG window:

Inventory\Inventory Transaction Entry

Invoices - From the main VMFG window:

Receivables\Invoice Forms

Labor Tickets - From the main VMFG window:

Eng/Mfg\Labor Ticket Entry

Master Product Configurator Interface - From the main VMFG window:

Eng/Mfg\Configurator Interface Maintenance

Master Production Schedule - From the Material Planning window:

File\Master Production Schedule

National Motor Freight Codes - From the Application Global Maintenance window:

Maintain\National Motor Freight Codes...

Operation Types - From the Shop Resource Maintenance window:

Edit\Operation Types...

Packaging Types - From the Application Global Maintenance window:

Maintain\Packaging Types...

Part Trace Profiles - From the main VMFG window:

Inventory\Part Trace Profile Maintenance

Parts - From the main VMFG window:

Inventory\Part Maintenance

Physical Inventory, Enter Counts - From the Physical Inventory Count window:

File\Enter Counts

Physical Inventory, Enter Recounts - From the Physical Inventory Count window:

File\Enter Recounts

Physical Count, Review All Counts - From the Physical Inventory Count window:

File\Review All Counts

Physical Inventory - From the main VMFG window:

Inventory\Physical Inventory Count

Planning Bill Of Material - From the Material Planning window:

File\Planning Bill of Material...

Planning Forecast - From the Material Planning window:

File\Planning Forecast...

Presentation Sequence - From the Shop Resource Maintenance window:

Edit\Presentation Sequence...

Pricing Information - From the Part Maintenance window:

Maintain\Unit Prices by Customer...

Maintain\Unit Prices by Market...

Maintain\Unit Prices by Discount Code...

Product Codes - From the Part Maintenance window:

Maintain\Product Codes...

Progress Billings - From the main VMFG window:

Receivables\Progress Billing Entry

Purchase Addresses - From the Vendor Maintenance window:

Edit\Purchase Addresses...

Purchase Orders - From the main VMFG window:

Purchasing\Purchase Order Entry

Purchase Receipts - From the main VMFG window:

Purchasing\Purchase Receipt Entry

Recurring Payables - From the Invoice Entry window:

Maintain\Recurring Payables...

Recurring Receivables - From the Invoice Entry window:

Maintain\Recurring Receivables...

Remit To Addresses - From the Vendor Maintenance window:

Maintain\Remit To Addresses...

Return Material Authorizations - From the main VMFG window:

Sales\Return Material Authorization

RMA Reasons - From the Application Global Maintenance window:

Maintain\RMA Reason Table...

Sales Representatives - From the Customer Maintenance window:

Maintain\Sales Reps...

Sales Taxes - From the main VMFG window:

Sales\Sales Tax Group Maintenance

Service Charge Defaults - From the Application Global Maintenance window:

Maintain\Service Charge Defaults...

Service Dispatches - From the main VMFG window:

Purchasing\Service Dispatch Entry

Service Receipts - From the main VMFG window:

Purchasing\Outside Service Receipt Entry

Services - From the main VMFG window:

Purchasing\Outside Service Maintenance

Shift Definition - From the Employee Maintenance window:

Edit\Shift Definition...

Ship Via's - From the Application Global Maintenance window:

Maintain\Ship Via Table...

Shipments - From the main VMFG window:

Sales\Shipping Entry

Shipping Addresses - From the Customer Maintenance window:

Maintain\Shipping Addresses...

From the Customer Order Entry window:

Edit\Shipping Address...

Shop Calendars, Global - From the Application Global Maintenance window:

Located on the Scheduling tab.

Shop Calendars, Specific - From the Concurrent Scheduler window:

File\Weekly Calendars...

Shop Groups - From the Shop Resource Maintenance window:

Edit\Shop Groups...

Shop Resources - From the main VMFG window:

Purchasing\Shop Resource Maintenance

Shop Views - From the Shop Resource Maintenance window:

Edit\Shop Views...

Standard Industry Codes - From the Application Global Maintenance window:

Maintain\SIC Table...

States and Provinces - From the Application Global Maintenance window:

Maintain\States and Provinces...

Territories - From the Application Global Maintenance window:

Maintain\Territory Table...

Transit Times - From the Warehouse Maintenance window:

Edit\Transit Times...

Units of Measure Maintenance - From the main VMFG window:

Inventory\Unit of Measure Maintenance

Vendor Banks - From the Vendor Maintenance window:

Maintenance\Vendor Banks...

Vendor Request For Quote - From the main VMFG window:

Purchasing\Vendor RFQ Entry

Vendors - From the main VMFG window:

Purchasing\Vendor Maintenance

Vendor Services Supplied - From the Outside Service Maintenance window:

Maintain\Vendor Services Supplied...

Vendors Supplying Service - From the Outside Service Maintenance window:

Maintain\Vendors Supplying this Service...

Visual Messages - From the main VMFG window:

Admin\Message Maintenance

Warehouse Locations - From the Part Maintenance window:

Maintain\Warehouse Locations...

Warehouses and Locations - From the Warehouse Maintenance window:

Edit\Location/Parts

Withholding Codes - From the Vendor Maintenance window:

Maintain\Withholding Codes...

Work Orders - From the main VMFG window:

Eng\Mfg\Manufacturing Window

Bibliography

Clark, Kim B. and Wheelwright, Steven C. Managing New Product and Process Development. New York: The Free Press, 1993.

Fallon, Howard. How to Implement Information Systems and Live to Tell About It. New York: Wiley-QED, 1995.

Haynes, Marion E. Project Management: From Idea to Implementation. Menlo Park: Crisp Publications, 1989.

Nicholas, John M. Managing Business and Engineering Projects; Concepts and Implementation. New Jersey: Prentice-Hall, Inc., 1990.

Microsoft Corporation. User's Guide for Microsoft Project. 1995.

Project Mentors. Project Management. San Francisco, 1996

Scholtes, Peter R., et al. The Team Handbook. Madison: Joiner, 1988.

Shonk, James H. Team Based Organizations. Homewood: Business One Irwin, 1992.

http://webopedia.internet.com/computer_science/databases/odbc.html

<http://www.comp.lancs.ac.uk/pdu/short-courses/pmdpc.html>

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