Xyvision Production Publisher

Version 5.1

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XYVISION

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SECTION 1

Overview

Xyvision Production Publisher (XPP) excels in the automated composition and pagination of , high-volume, complex publications requiring rapid turnaround, text and graphics input from multiple sources, and output in a variety of formats and media. Typical documents produced with XPP include scientific journals, industrial catalogs, directories, legal and financial documents, textbooks, and technical manuals.

Benefits

XPP provides the following benefits:

- High throughput and full automation
- Faster page turnaround
- Lower labor and materials costs
- Improved typographic quality
- Streamlined revision cycle
- Expanded production and output capabilities
- Easy integration with document management systems, SGML / XML authoring tools, and other components of a full scale information management and delivery environment

Background

Founded in 1982 with the goal of introducing a new generation of production publishing systems for commercial publishing and technical documentation, Xyvision brought a new level of price / performance to the industry. At that time, individual steps in publishing production were not integrated, causing the process to be time-consuming, decentralized, and expensive. While other vendors addressed solutions for automating individual tasks, Xyvision systems automated and integrated the entire publishing process, from the initial capture of data to the output of final pages.

In 1983, Xyvision delivered the first integrated publishing system, later named Xyvision Parlance Publisher, which dominated the high-end pagination marketplace. These early systems pioneered new concepts that remain unmatched today for automating the production of high-volume, high-quality, complex documents. Distinguishing features include powerful batch and interactive composition and pagination, automated looseleaf publishing, unlimited custom system development, and extensive customer services. Leveraging these capabilities, hundreds of Xyvision systems have been put into production. The result for customers is a

reduction in production costs by an average of 50% and up to 70% improvement in productivity and turnaround.

In early 1996, Xyvision announced a major release of its publishing product, XPP Version 5.0 that combines the strengths of its flagship system with innovative Display PostScript technology and versatile electronic output options. Renamed *Xyvision Production Publisher* (XPP), the document production system is unmatched in the combination of processing speed, automation capabilities, and interactive WYSIWYG display.

In September 1998, Xyvision released XPP Version 5.1, which further improved automated composition and increased support for SGML- or XML-tagged data, enabling XPP to integrate easily into any structured information environment requiring complex batch formatting.

SECTION 2

Standard Features

XPP provides publishing capabilities designed to produce professional-quality, high-volume publications, including:

- Automatic, high-speed batch composition and pagination
- Sophisticated graphics handling
- Interactive page design and editing utilizing Adobe's Display PostScript technology
- Support for high-quality, commercial composition
- Generic tagging through style libraries
- Flexible footnote controls
- Powerful tabular composition
- Interactive and background spell checking
- Automatic edit trace (black-lining)
- SGML / XML Support
- Variety of standard output options including PostScript, enhanced PostScript for Distillation to Adobe's PDF (Portable Document Format) and HTML (Hypertext Markup Language)

Automatic Batch Composition and Pagination

During batch pagination, an entire publication is composed and paginated automatically, according to user-defined styles. Xyvision batch pagination software provides a high degree of automatic decision making based on user-defined rules and preferences. Capabilities include:

- Unlimited number of page designs in a document
- Automatic placement of all page elements
- Automatic numbering and cross-referencing of sections, subsections, tables, footnotes, and illustrations
- Mixed column formats on a single page
- Any number of columns per page, with automatic spanning
- Automatic column balancing
- Automatic generation of running headers and footers

- Automatic anchoring of a collection of elements or graphics to a reference point on a page
- Automatic vertical line spacing
- User-defined widow and orphan control
- Automatic sizing of rules and boxes, based on column width and depth
- Automatic coloring and tinting of page elements

Page-Oriented Database

Once a publication has been composed and paginated, the system stores the document in paginated form and tracks each page as an entity. In the production environment, this capability provides the control and management required to help contain the impact of editorial changes.

Controlled recomposition

Xyvision is unique in its ability to control the potential "ripple effect" of edits and eliminate unwanted changes to other pages. A user can compose a single line, block, or page and contain overflow text, thereby eliminating page rippling.

Multi-user conferenced access

The page-oriented database enables multi-user conferenced access, allowing up to 16 users to concurrently work on the same document. Each operator checks out a page or range of pages on which to work. If an operator adds or deletes pages, the entire job can be recomposed and repaginated automatically when all the revisions are complete.

Automatic Processing

Xyvision's Autoprocessing and Xychange capabilities enable batch input and conversion of text and graphics from most standard, third-party applications and systems.

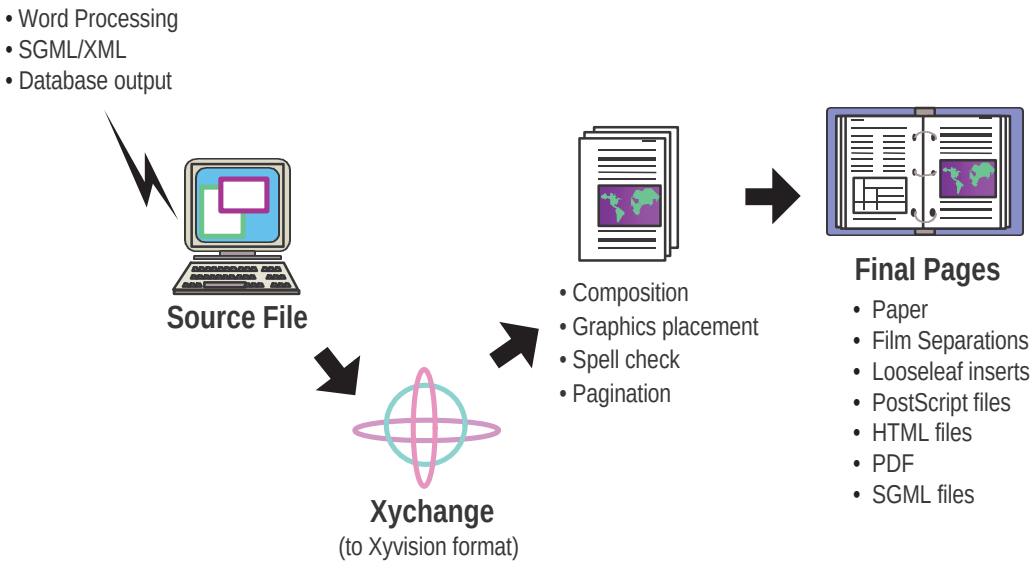

Figure 1. *Xyvision's Autoprocessing facility enables users to create an entire publication unattended, in background mode.*

Autoprocessing

Part of the standard product, Autoprocessing enables users to create an entire publication unattended, in background mode, from input of raw data to final output. Autoprocessing establishes background processing queues that can:

- Receive text and graphics in multiple formats from external sources
- Initiate first-pass composition and pagination
- Perform spell checking
- Place graphics and other elements in the correct positions on each page within the document
- Send pages to a laser printer or image setter for proofing or final output

Xychange text translation

Xychange is XPP's powerful translation facility for converting text from virtually any source into the coding structure of Xyvision software. Users can define and customize Xychange translation tables to meet unique requirements. Capabilities include conditional translations based on if/then parameters, single- and multi-character wild cards, reinput ability, and debugging tools. Six input and six output tables can be chained together to reprocess translated text providing almost unlimited translation possibilities.

Sophisticated Graphics Handling

Graphics placement

XPP provides capabilities for easily integrating graphics with text. Graphics are stored in libraries and automatically merged with text during the composition and pagination process. The master graphic is not actually inserted in the document, enabling several documents to share and reuse a single graphic.

Other graphics editing and pagination features include:

- Automatic numbering and cross-referencing of illustrations
- Automatic positioning of graphics, anchored or floating
- Interactive scaling, cropping, or rotation of a single graphic instance without modifying the master graphic
- Grouping of graphics with captions, annotations and other text elements through *Pickups*, a collection of elements that can be anchored to a reference point and automatically processed into a document
- Ability to insert multiple instances of the same graphic within a graphic Pickup.

Graphic import and conversion

XPP provides standard and optional filters to import a variety of graphic formats into Xyvision graphic libraries. Standard supported formats include:

- TIFF color, greyscale, and bitmap
- PostScript

- Encapsulated PostScript (EPS)

XPP provides links to graphics created in supported formats and converts them, as needed, for screen display and PostScript output. When users update and store a master graphic, XPP automatically triggers the conversions so that the next time the page is output, the updated graphic appears in the correct format. If the source graphic editor is resident on the UNIX server, it may be launched from the XPP page editor by selecting the associated graphic.

Interactive Controls

Users can interactively modify the page design of any element on a page, including such actions as rotating text and text blocks, screening and coloring backgrounds, and creating page elements outside the page boundaries.

Display PostScript

XPP incorporates Adobe's Display PostScript (DPS) technology. The DPS system displays the page on the computer screen using the same rendering technology that creates the printed page. By adopting a unified PostScript model, XPP ensures that the displayed page will match the printed page with the highest possible fidelity.

Users can view a DPS application on a 24-bit true-color, 8-bit color, gray scale or monochrome display. The DPS system renders output with the best possible representation for each output device—true color on true-color devices, and black and white halftones on monochrome displays. The DPS system can render graphics at a resolution appropriate for the display. PostScript language fonts, graphics and images will always be the highest quality that the device capabilities permit.

Modifying Page Layout

Users can design pages directly on the screen with a mouse. As the user draws a text or graphics block, the width and depth are displayed interactively in any of six units of measure: picas, points, inches, ciceros, didots, or millimeters. Users can also design pages using form filler menus and precise x/y coordinates.

Freezing page elements

Xyvision provides several options for locking the position of page elements, enabling users to perform tasks such as reflowing text without relocating graphics, modifying constant data such as running heads and folios, and greatly reducing the cost of updating text material.

Page Display Options

XPP provides a variety of page displays including single page, landscape page, zooming up to 400%, and two consecutive or nonconsecutive pages.

Line Editor

In addition, the system allows users to view hidden tags and codes on the entire page, or line-by-line through a *Line Editor* window.

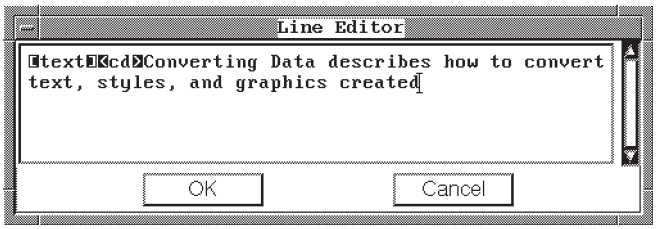

Figure 2. *Users can view hidden codes with XPP's Line Editor.*

Status Window

The context-sensitive *Status Window* displays detailed status information depending on the current cursor position. Types of status available include line, block, page, graphic, and tabular.

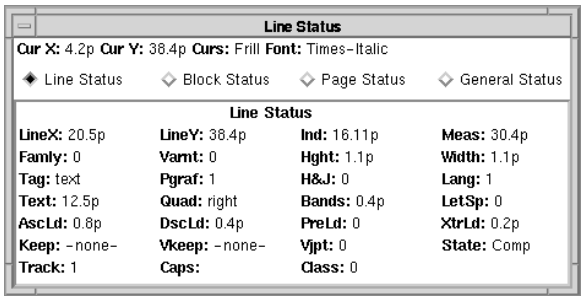

Figure 3. *XPP's Status Window provides context-sensitive information.*

High-Quality Typographic Controls

XPP is designed for publishing professionals who require high-quality typographic controls. XPP's interchangeable style libraries and generic tagging allow easy document style alteration without recoding.

Standard composition includes such features as:

- User-definable commands (macros) to automate complex typographic functions
- Track and pair kerning, word, letter, and interline spacing, and aesthetic ragging
- Automatic ligature and accent replacement
- Auto-sizing of screened and colored boxes around text

Style Libraries

XPP composes and paginates according to user-defined style specifications. Users set up fill-in-the blank style tables. The software prompts users to provide complete style data and displays a list of style options where applicable. This enables the user to have complete control over such elements as hyphenation rules, character and paragraph formats, page sequence, and page layouts.

Style tables are stored in style libraries, where they can be shared among several jobs, or at the job level, where they define formats for a specific job.

Generic tagging

User-defined generic tags mark up such individual document elements as chapter heads, first-level head, bulleted lists, and captions. Users define the typographic attributes of a generic tag in the style tables. During composition and pagination, these attributes are automatically applied.

In addition, a single tag can contain multiple linked style format rules with the ability to repeat specified rules in any order. This feature is useful for such tags as side heads with corresponding text, multi-part directory listings, and numbered and nested lists.

Once a document has been tagged, the user can easily change the style of the entire document simply by using a different set of style tables. Tag styles can also be revised interactively while editing a page.

Style inheritance

Style tags can also inherit certain composition attributes (such as point size, font, line measure, and indent) from preceding styles in the style table.

Typographic Commands

Users can interactively override style specifications on a page using standard Xyvision macros, for such attributes as line measure, typeface, kerning, and point size. Users can also create their own macros to automate special typographic effects and functions. For example, a user could write a macro to draw a bar over a character in text or to generate the current month and year in a running footer. User-defined macros can be stored in style libraries or at the job level.

Color, Tints, and Patterns

XPP includes a standard macro-based Tints and Patterns package capable of both process (CMYK) and spot color definition. Text may be tinted and / or colored, objects of different shapes (circles, squares, ellipses, etc.) can be created and filled with a tint or pattern, and text blocks can be outlined with round or square corners and tinted backgrounds. XPP supplies 64 standard patterns defined in a style table, which can be expanded by the user to include custom PostScript patterns.

Virtually all XPP composition objects can be defined to have a specific color and fill, including pickups, text and text blocks, tables, table cells, and table rows.

Footnotes

Extensive footnote capabilities include:

- Footnotes below text block where referenced
- Footnote spanning across multiple column pages
- Multi-column footnotes under a single text block
- Footnotes paginated at the end of a document
- “Biblical” footnotes set horizontally, left to right, across bottom of page
- Automatic control over ratio of main text to footnotes on a page

- Automatic placement of footnote separators (rules, asterisks, etc.)
- Control over footnote separator type, style, and spacing
- Two footnote tracks with either number or symbol call-outs
- Footnotes within tables

Tabular Composition

XPP provides highly automated and interactive tabular composition. This combination lets users utilize predefined formats for similar tables, create unique styles for customized tables, and interactively edit both the content and format of any table.

Creating tables

To create a table, users can either select a predefined table style or specify parameters for a new style. There is no limit to the number of table styles that can be defined. As with other XPP styles, table styles can be stored at the library level and shared among jobs or stored and modified at the job level.

Using fill-in-the-blank style templates, users can specify the following parameters:

- Ruling characteristics (weight, width, depth) with independent left, right, top, and bottom rules
- Placement of the entire table relative to a page or column
- Composition parameters for text in a single cell, column, or row
- Gutter values for a row, column, or entire table, with independent left and right side gutters
- Individual column widths by specifying either a fixed value or a ratio, or by letting the software calculate the widest text in the column

Composing tables

During composition, the tabular software automatically sets up the table according to the predefined tabular styles. Tabular composition includes all basic XPP composition features including line wrap, hyphenation, kerning, edit trace, inserted graphics, and spot and process color.

Interactive table editing

XPP treats tables, rows, columns, and cells as discrete entities, allowing users to edit both the structure and content of a table interactively.

XPP enables users to quickly select a row or column, then move, copy, delete, or swap it with another row or column. Recomposition can be contained to a single row, column, or cell. You can also override any table style parameter with tabular commands, which can be automatically inserted from a pop-up menu.

Comprehensive tabular functions

Tabular composition capabilities include automatic:

- Splitting of tables across columns and pages, with user-defined continued heads and generation of continuation text

- Decimal alignment and alignment of any three characters within a cell
- Hanging of specified characters in the right or left gutter
- Table-breaking across columns and pages
- Generation of user-defined continued heads and continuation text
- Straddling of text and heads across rows or columns
- User-specified gutter values for individual rows, columns, or an entire table
- Single or double underlining, to width of text or column
- Variable column widths based on widest text, specified proportions, or fixed size
- Variable independent rule weights for left, right, top, and bottom table rules
- Tabular justification, vertical or horizontal
- Placement of graphics within tables and sizing of cells to accommodate graphics

Edit Trace

Xyvision's Edit Trace (or black-lining) capabilities significantly reduce review and revision cycles by automatically flagging changes to text as they are made. You can use edit trace for individual editing sessions, or you can save traces from one editing session to the next, creating a cumulative record of edit traces.

XPP inserts change bars in the margin to indicate changed text and underlines added text. Deleted text can be noted by a delta symbol or displayed as strike-through text. Because edit tracing is automatic, it can save valuable operator time.

Edit traces can be customized for each job. For example, you can:

- Define change bar weight
- Display or suppress edit traces on both the workstation screen and proof pages
- Select the edit traces you want displayed or output
- Delete traces after every editing session or save traces for a cumulative record
- Print documents with cumulative edit traces
- Print change bars at edge of page or next to columns in multi-columns layouts

Interactive and Background Spell Checking

Spell checking based on the Merriam-Webster American English dictionary is standard on all American English Xyvision systems. Supplemental legal and medical dictionaries and international language dictionaries can be purchased as separate options.

Spell checking capabilities can be used interactively or in batch mode and offer these capabilities:

- List of suggested correct spellings that can be inserted automatically

- Ability to create user-defined supplemental dictionary
- Ability to create job-specific dictionaries
- Ability to add words for current editing session only
- Ability to limit checking to specific elements, such as main text, tables, or footnotes
- Option to display or insert logical alternatives to misspellings
- Checking for incorrect punctuation
- Checking for improper capitalization, invalid roman numerals, and duplicate words
- Support for up to 16 dictionaries within a single job

SGML/XML Support

XPP's tag-based system supports SGML or XML import and export through a conversion tool such as OmniMark or Balise. With version 5.1, Xyvision has reduced the dependency required for conversion applications by improving native support for structured data. Specific SGML / XML enhancements in 5.1 include:

- Longer tag and macro names enabling one-to-one mapping of SGML / XML tag names
- Ability to preserve and use SGML / XML attribute values within XPP tags or macros
- Direct support for SGML / XML character entities.

PostScript Output Options

XPP outputs composed files in PostScript format to standard PostScript output devices or to removable media for post processing applications. When writing files to disk, a user can concatenate all divisions or selected divisions within a Job into a single electronic PostScript file.

Color Separated Output

The color separation feature enables output of four-color (CMYK) and unlimited spot color separations through any PostScript RIP. The quality of the screens and the registration of the separations are determined by the output device and / or RIP. Color separation uses color definitions from the standard *Tints and Patterns* package and supports EPS process and spot color separations.

Color separation also includes a color mapping utility that enables a user to map one or more spot colors to other spot colors, so that they are output on the same separation. This is useful when an imported EPSF graphic contains a different spot color than is specified in the current document.

PostScript Level 2 Graphics Compression

XPP uses PostScript Level 2 graphics compression to decrease the size of XPP output files that include XyRaster (bitmap) or Tiffcontone images. Image compression averages about 5 to 1. It supports either the traditional 7 bit ASCII output format required by most parallel and TCP/IP Ethernet connected RIPs, as well as full 8 bit data format allowed by most Ether Talk connected RIPs. The 8 bit data format gives the maximum compression.

EPSF Graphic Generation

The EPSF Graphic Generation feature converts a Xyvision page, or series of pages, into individual EPSF graphic files that can be imported into QuarkXPress or other Macintosh page composition programs. EPSF Graphic Generation creates a PICT Macintosh view file and is useful for customers who want to include a Xyvision page or portion of a page (such as a Xyvision table or math equation) into a Macintosh document.

Film Control: Wrong Read/Reverse

This PostScript driver feature allows users to control the imaging attributes of negative, wrong reading output to any PostScript output device or post-processing process such as imposition.

Support for Adobe Acrobat PDF

XPP includes an Adobe Acrobat output module that, with Acrobat Distiller, automatically produces PDF (Portable Document Format) files complete with Acrobat links, bookmarks, notes, and article beads. This allows users to create fully functional Acrobat files directly from XPP, eliminating time-intensive manual updating with Adobe Exchange.

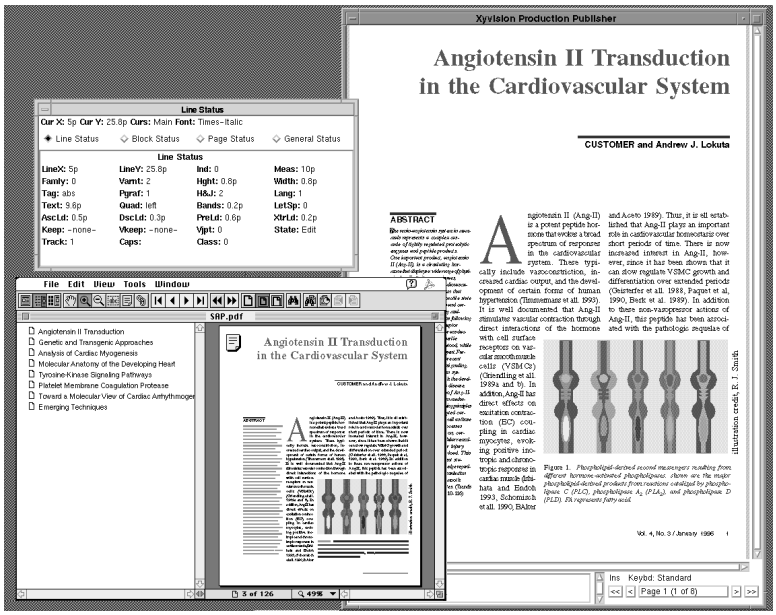

Figure 4. *XPP produces enhanced PostScript output that, when processed with Acrobat Distiller, produces full-featured PDF files.*

The automatic creation of fully functional Acrobat files from XPP gives customers the ability to easily maintain a single source from which to output both print and digital output, creating significant additional revenue opportunities. Specifically, XPP's Acrobat support includes:

- Creation of a single Acrobat file from multiple Xyvision Divisions
- Cross-reference links from Tables of Contents and Indexes to appropriate pages
- Control over final Acrobat document display with Acrobat property sheet
- Links within one Division (document) and across multiple Divisions (documents)
- Creation of Acrobat Notes within XPP
- Article (story stream) support, so that users can follow a "bead" of text throughout a document, such as with a magazine article
- Ability to pass through any PostScript printing commands into the output stream

HTML Conversion Toolkit

XPP also includes an HTML Conversion Toolkit that enables users to create tagged HTML files for viewing with standard HTML browsers.

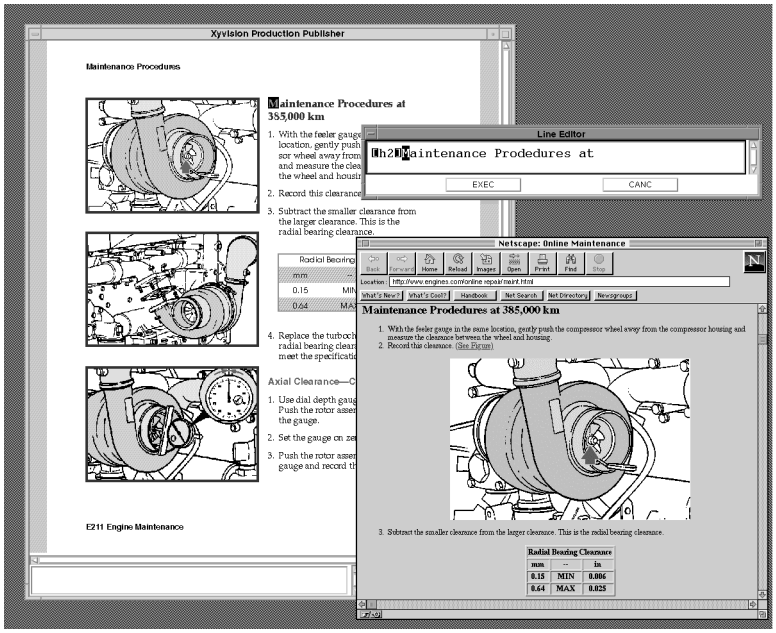

Figure 5. *XPP's HTML Conversion Toolkit enables users to create HTML files for viewing on the World Wide Web.*

The toolkit includes:

- An HTML Xychange table that converts a named set of Xyvision tags to standard HTML codes
- Support for standard HTML 2 and 3 specifications

- Netscape tabular support, including spanning of rows and columns
- Footnote references linked to footnote text
- Support for graphic references
- Internal and external links
- Graphical User Interface that enables users to match any Xyvision tags to the HTML tag set
- Automatic conversion of Xyvision Pi and accented characters into HTML character entities.

The HTML toolkit is user-customizable to support a variety of document structures.

SECTION 3

XPP Software Options

In addition to XPP's standard publishing capabilities, Xyvision provides optional software for specific applications, including:

- Automatic Looseleaf Composition
- Contents and Indexing
- Math Composition
- International language support
- Magazine Layout and Pagination
- Open Prepress Interface (OPI) support
- XyUpdate
- EDGAR output
- Word Perfect filters
- Custom filters
- Integration Toolkit
- Livelink interface

Automatic Looseleaf Publishing

Xyvision Looseleaf Publishing software provides comprehensive tools for streamlining the update of pages in frequently-revised publications and significantly reduces the time and cost of updating pages and maintaining looseleaf publications. The goal of publishing documents in looseleaf format is to generate and issue as few new pages as possible with each document update.

With Automatic Looseleaf composition, users first set up a looseleaf style sheet in which they can define:

- How deleted pages are treated during the update
- Whether automatically generated page-deletion statements are generated
- How full-page graphics, tables, and other page elements are treated
- Whether right pages are filled, where possible, before left pages
- How to resolve text overflow on edited pages

Once users define their preferences, the software automatically composes and paginates with the goal of creating the minimum number of change pages while

following their preferences. Automatic looseleaf composes only the edited pages. Additionally, the same page numbers that were in effect before composition remain in effect after automatic composition.

Contents and Indexing

Xyvision's CITI (Contents, Indexes, Tables, and Illustrations) option enables automatic production of tables of contents, indexes, and lists of tables and illustrations.

Data to be picked up for a Table of Contents, List of Tables, or List of Illustrations usually requires no operator intervention. To produce a Table of Contents or List, the system automatically extracts user-defined data, inserts page numbers, and formats pages according to predefined specifications. The software can also extract print-suppressed text and text between specific strings. After the software creates the composed Contents or List file, users can further edit the file if needed.

To produce an Index, the software extracts marked words, phrases, or text falling between specified start and stop flags (such as level one headers), deletes duplicate entries on a page, generates page numbers, and formats the entries and pages according to predefined specifications.

Math Composition

Math Composition software simplifies the complex sizing and positioning operations of math typesetting, and allows operators to create math constructs using simple commands.

Capabilities include:

- Automated assembly of common math constructs
- Fully interactive display and editing capabilities
- Libraries for predefined math styles
- Automatic positioning and sizing of math components
- In-line and display math expressions
- Matrices, arrays, and determinants
- Unrestricted placement of math expressions

International Language Support

H&J/Spell Check

Xyvision offers hyphenation/justification and spell check in the following languages: Afrikaan, Brazilian, British, Danish, Dutch, Finnish, French, French Canadian, German, Italian, Norwegian, Nynorsk, Portuguese, Spanish, Swiss German, and Swedish.

Xyvision offers incremental dictionaries to the standard, 89,000 word American English dictionary, including:

- Legal
- Medical
- Biology, Geography, Legal, Medical, Science, and Technical

In addition, Xyvision offers Advanced British, with Legal and Medical dictionaries.

Specialty H&J

Xyvision offers H&J algorithm dictionaries in the following languages: Czech, Estonian, Greek, Hungarian, Latvian, Lithuanian, Polish, Slovak, and Thai.

Double-Byte Asian Language Support

Xyvision provides double-byte character support needed to support Asian character sets. XPP displays are currently available for Korean, traditional Chinese, simplified Chinese, and Japanese. Double-byte batch composition is supported on all XPP platforms. A special text editor is also available for Sun Solaris that allows interactive editing of Korean, Chinese, or Japanese text.

Bilingual Merge

Bilingual Merge enables users to produce documents containing text in two languages, positioned either side-by-side on a page or on facing pages. The software tracks both languages and vertically aligns the two sets of text. This feature requires the Magazine Layout and Pagination option.

Magazine Layout and Pagination

The Magazine Layout and Pagination option addresses the special production requirements of magazine page design and make-up by enabling users to create page layouts and label text blocks with the appropriate story. A story is text, such as an article in a magazine, assigned to specific blocks on one or more pages. The software automatically flows the story text into the appropriate blocks, supplying *continued to* and *continued from* page numbers. Any overset text is stored off the page in an electronic galley. Users can edit, recompose, and repaginate stories individually, pushing text forward or backward to story blocks on continuation pages. This option is also required to support “Article Beads” when creating Acrobat PDF files.

Open Prepress Interface (OPI) Support

OPI (Open Prepress Interface) is a collection of PostScript comments that allow page composition applications to use low resolution images for position and proofing while a prepress system or OPI server automatically replaces the original high resolution image when the final film or plates are generated.

Xyvision's OPI Graphics Handling option replaces graphics in Xyvision divisions with standard OPI comments in the Xyvision PostScript output stream. These comments describe the name, placement, and size of the image, as well as any "instance" cropping and scaling specified within the Xyvision file.

Typical OPI Workflow

In a typical OPI workflow, graphics are scanned or input to an OPI server, which is a graphics management system that manages the location, workflow, and storage of high resolution graphics. The OPI server creates a low-resolution XPP view file from the high resolution image and sends the view file to the Xyvision Production Publisher (XPP) system for "position only" placement in an XPP document.

When the document is ready for final production, XPP embeds OPI comments into the PostScript output file in place of the position-only graphics. The PostScript file is then passed to the OPI server, which replaces the OPI comments with the original high-resolution graphic before sending the file to a high-resolution output device for generation of final film or plates.

In addition to generating OPI comments, Xyvision's OPI option can export a Xyvision graphic to a standard format for use by a prepress application, such as imposition. This feature allows users to create OPI PostScript files without having an OPI server.

XyUpdate

XyUpdate extends XPP's ability to receive information from and export information to external databases in other parts of an enterprise. The XyUpdate toolkit enables experienced users to dynamically integrate information from external databases with any XPP document. This capability is useful for such tasks as automatic price updates in catalogs, or part number updates in technical documentation. It can also be employed to export such information as line counts, lists of items which appear on particular pages, or composition parameters.

XyEDGAR

EDGAR (Electronic Data Gathering Analysis and Retrieval) was developed by the SEC (Securities and Exchange Commission) in 1984 as a program for filing financial reports electronically. Electronic filing of registration statements or periodic reports is now mandatory for all publicly held companies.

Financial printers who file financial documents on behalf of their customers, or who provide preprocessed materials for their customers to file themselves, need software that enables them to use the same source file for both the typeset and electronic version. Xyvision's XyEDGAR module enables users to automatically produce the electronic filing from the master typeset version within a few minutes after final changes have been made.

The XyEDGAR module operates directly on the formatted Xyvision Production Publisher (XPP) database. Using the detailed knowledge about page position and character location contained within that database, the XyEDGAR module converts the proportionally spaced typeset file to a monospaced ASCII file, where everything is expressed in characters of equal width and fixed linespaces.

In accordance with EDGAR filing regulations specified by the SEC, the XyEDGAR module outputs text at 80 characters wide. Tables span up to 132 characters in width. If a table has more columns than will fit in this width, XyEDGAR will divide the table into two or more pieces, repeating the columns headers and the designated "stub" column in each piece.

The XyEDGAR output module optimizes the formatting of the EDGAR text version automatically and robustly, without requiring that an operator add special mark-up or manually rework the file. If required, the operator may modify such parameters as EDGAR tag names, maximum width of stub columns, whether or not to output revision marks, and ASCII text to replace typeset pi characters.

For electronic filings, XyEDGAR works in conjunction with EDGARLink, filing support software distributed free by the SEC to all registered EDGAR filers.

WordPerfect Filters

Xyvision provides two WordPerfect filters: an input and an output filter. The input filter consists of a parsing utility and a basic style bundle. The parser converts WordPerfect binary into Xyvision Standard Format (XSF). Xyvision Consulting Services customizes the translation to fill a user's exact requirements. The current product is compatible with WordPerfect 6.0

The WordPerfect output filter consists of Consulting Services and a tool kit. Depending on the customer's requirements, the outbound filter can be simple or quite complex. Basic features include:

- Several basic WP styles
- XPP tabular to WP conversion
- Configuration maps that convert XPP elements to WP elements

Custom Filters

Xyvision Consulting Services also provides custom filters for other document formats, such as RTF (Rich Text Format). Each filter requires a custom quote from Xyvision Consulting Services.

Integration Toolkit

The XPP Integration Toolkit is a graphical user interface designed to integrate XPP with third-party document management systems. Fully customizable, the XPP Integration Toolkit runs in a Windows 95 or NT client environment. Capabilities include:

- Remote control of processes on a UNIX server from a Windows PC
- Remote control of XPP printing options including looseleaf insert pages, PDF, paper, and color separations
- Automation of XPP publishing processes

Livelink Interface

XPP can be integrated with Open Text's Livelink Intranet system, enabling companies to merge the publishing process with the editorial group, art department and other workgroups within an enterprise. XPP can be also be used as an embedded composition engine to automatically compose and paginate complex documents from structured data residing in the Livelink repository.