Visual eForms Enterprise Server
Specifications Manual
# Contents

**Solution Overview** ........................................................................................................ 1
  - Visual eForms Enterprise Server ................................................................................. 1
  - Automating business processes via the Web ............................................................... 1
  - Forms Management and Automation Across The Enterprise ..................................... 1
  - Complete Set of Easily Configurable Features ......................................................... 1
  - Tools For Efficient Forms Management/Administration ......................................... 2
  - Visual eForms Enterprise Server is Open-Source Compliant .................................... 3

**Visual eForms ES Specifications** .............................................................................. 4
  - Visual eForms Enterprise Server ................................................................................ 4
  - Architecture .................................................................................................................. 10
  - Designer ....................................................................................................................... 12
  - Connectivity and Integration ....................................................................................... 16
  - Merge ............................................................................................................................. 16
  - Database Support ......................................................................................................... 17
  - Application Development ............................................................................................ 17
  - Web Development ......................................................................................................... 18

**Frequently Asked Questions** ................................................................................... 19
Solution Overview

Developed over the past two years, Cerenade's Visual eForms Enterprise Server has incorporated the valuable input and suggestions of our customer base. Because of this, we feel we have an advantage in providing our customers with the ability to deliver and manage online form-based applications. This advantage is translated into a turnkey application (Visual eForms Enterprise Server) that meets and/or exceeds the great majority of Fortune 4000 company requirements.

**Visual eForms Enterprise Server**

This enterprise application allows users to design custom forms and then fill, save, print, email, and track them across the enterprise. It also offers sophisticated workflow management complete with tracking, version control, audit trail and routing capabilities. In addition, Visual eForms Enterprise Server provides seamless form import capabilities from FormFlow, OmniForm, MSWord, WordPerfect, and Adobe PDF.

**Automating business processes via the Web**

Visual eForms Enterprise Server harnesses the power of the Web into a cost-effective solution for automating forms-based business processes over the Internet, intranets and extranets. This process is accomplished with Cerenade’s leading edge technology that promotes open-architecture via its Visual eForms Toolbox component-based platform.

**Forms Management and Automation Across The Enterprise**

Visual eForms Enterprise Server provides the necessary application engine to enable the manipulation and distribution of electronic forms across the enterprise. Visual eForms Enterprise Server is ideally suited to automating Human Resources, Manufacturing, Sales, Marketing, Customer Service and Finance operations and extending them throughout your organization.

**Complete Set of Easily Configurable Features**

- Powerful search engine for forms
- Support for multi-layered forms categories
- Ability to view, fill, print, and fax forms
- Forms and data can be saved to the user’s hard drive or server database
- Individual login/logout
Chapter 1  Solution Overview

- Offline forms processing with online synchronization capability
- Full Internet Explorer and Netscape support
- Tracking feature monitors in-process activities and keeps copies of emails received in the Inbox
- Routing and Approval processing with an Auto Notification option
- Email-independent platform for delivery purposes
- Signing and routing of forms with digital signatures
- Advanced support for audible forms

**Tools For Efficient Forms Management/Administration**

Visual eForms Enterprise Server enables administrators to access a feature set not available to general users.

- The administrator can view, print, and examine the audit trail, which keeps track of all changes made to a form (when changes were made and by whom).

- Version control allows the administrator to present individual users with data saved in any previous version of a given form. The retention period for auto-removal of obsolete forms is set by the administrator.

- The administrator can add or delete individual users and can build unique user groups. In addition, the administrator can designate or delete routing rules.

- Multi-layered categories of forms can be built and dynamically linked to one or more user group.

- Numerous reports can be generated according to administrator defined criteria
Visual eForms Enterprise Server is Open-Source Compliant

Visual eForms Enterprise Server provides developers with the product’s source code to further enhance and customize this application for delivery of forms. Our open-source strategy is consistent with our usage of such industry standards as ODBC, LDAP, and XML in development of Visual eForms Enterprise Server.
Visual eForms ES Specifications

Visual eForms Enterprise Server

User Interface

• Search, Fill, Save, Print, ad hoc e-mail and user-defined routing
• Save Locally: saving data on local drive
• Save to the Server: saving data to the database on the web server
• Permit routing/fill/return of forms by external clients
• Automatic form scrolling
• Auto tab to next field once max chars entered
• Full form view capabilities
• Zoom in/out views
• WYSIWYG forms: form displays appropriately on any resolution monitor
• Paper look and feel: white background/black text
• Images/Logos: supports reusable images (corporate logo) in several formats: bmp, tiff, jpeg, wmf, pcx, png
• Form format compatible for use by external clients
• Toolbar: intuitive command buttons (print/save/magnify)
• Automatic paper selection: 8 1/2” x 11” v. 11x14”
• Restrict form access by group or role
• Shrink-to-Fit: automatically reduce text font as data is entered into a field allowing for more data to be entered into a field
• Addendum: create continuation sheet for overflow text entered into a field
• Envelope printing feature
• Spell check
• Cut, Copy, and Paste capabilities
• Text wrapping: text automatically wraps (this feature can be blocked at the time the form is designed)
• Multi-Page Forms: supports multiple page forms up to 512 pages per form
• Multi-Layout, Multi-Size Page Forms: supports different page sizes, Portrait and Landscape, and different color pages within the same form

• Off-Line: provides off-line processing with one touch; performs synchronization once the web application goes live with a click of a button

• Auto-Fill: automatic form fills from personal profiles, which are customizable by the user

• Local Databases: forms can interact with local databases with a click of a button

Electronic Signature and Security

• Signature Capabilities. Electronic signature capabilities are built-in. Electronic Signature fields are built into the form(s) at design-time. At run-time, users can electronically sign the form.

All the necessary software is embedded in the application. No additional hardware or software is required.

Product supports hand signature, Entrust, PKI, Verisign, NT domain security, and any user-defined signature types

• Security API. The product supports RSA Security API for signature authentication (e.g., pin number, e-mail address, etc.). You can use your own Security API if you want to.

• Signature Integrity Assurance. When the form is signed all fields are locked (user-defined), and if the form or its data is altered the authentication process fails. These provisions are made to ensure the integrity of the form (ensure that it has not been changed from its original format) while in transit and while stored either on an individual desktop system or in longer-term storage.

• Administration. PKI typical administration issues are required in the administration of the security authentication of electronic signatures.

• Multiple Signatures. The form can contain multiple electronic signatures. In addition, specific fields can be associated with any electronic signatures.

Designer allows for the addition of any number of electronic signatures of varying or similar types into a form.

• Multiple Signature Security. On a multiple signature form the product has the ability to lock those fields completed and electronically signed by each individual signature.

• Signature Field Lock. After a form has been electronically signed, the signed fields are locked to prevent tampering. The setup is provided in the Designer.
• **Security (FTP/HTTP).** FTP and/or HTTP access to forms is available for web/Internet-based thin-client applications (with proxy support to overcome problems with firewalls).

**Databases**

• **Database Versions.** Visual eForms Enterprise Server supports Microsoft SQL Server 6.5 or 7.0, Oracle® 7.3 or 8.0

• **Data Format.** Form data kept in the database is in XML.

• **Data Exchange.** The supported database can exchange its data with an external database such as the human resources or accounting database using BizTalk or a custom server-side application.

**Email**

• **Email Servers.** Visual eForms Enterprise Server uses LDAP and ADSI to support Microsoft Exchange 5.x, Lotus Notes® 4.5 and 4.6, Novel GroupWise, and others.

• **Sending Forms.** When a form is sent via email only a link to the form and data is sent. The actual form, data, or any attachment remains safe on the server. The sender can override this, however, and send form and data together as an attachment.

• **Email Attachments.** Attachments are supported in email or routing. The administrator can limit the size and/or the number of attachments.

• **Email Attachments.** Email attachments are bound to the form until the form is deleted.

• **Email Attachments & Form Attachments.** Email attachments and/or form data attachments are permanently attached to the form data record or the document.

• **WorkFlow.** Visual eForms Enterprise Server supports workflow routing of forms with signature authentication.

• **Routing.** There are two types of routing: 1) user defined and 2) administrator defined. The person filling in the form can designate the route a filled form is to take when emailed. In addition, the administrator can setup and configure the routing arrangements. These routing arrangements can be saved and reused.

• **Broadcast email.** Visual eForms Enterprise Server supports Broadcast email and Group Mailbox.
Conversion

- **Data Conversion.** The Product has the ability to open DBF/ASCII/MDB files created in FormFlow 1.1 to populate form fields.

- **Form Conversion.** Visual eForms converts FormFlow 1.x and 2.x forms as well as forms designed in OmniForm on a binary basis. Word, PDF, Excel, and other formats are converted by printing them into Visual eForms Writer. No additional converter or software is required. Paper forms are converted by first scanning them into OmniForm and then into Visual eForms format.

Section 508 Support

- **Section 508.** Visual eForms Enterprise Server is ADA Section 508 compliant.

- **Additional Software.** The Section 508 compliance is included in Visual eForms Enterprise Server and adds less than 50kb to the total installation on the user’s PC.

  There is no need for any screen reader software such as JAWS to be present on the user’s PC other than the base SAPI components, available for FREE from Microsoft’s web site. No additional Software is required.

  The Voice tone, pitch and speed are configurable by the user.

  Visual eForms Enterprise Server supports all Voice Activation hardware or software as well as all Braille keyboards as long as they are supported by Windows standard I/O devices.
Forms Management and System Administration

- **Console.** Visual eForms Enterprise Server provides a complete set of forms management as well as system administration functions under an administration console.

- **Tasks.** The administrator can perform any of the following tasks:
  - Create/maintain users, user groups, form categories and forms
  - Generate reports
  - Perform audit trail and Retention
  - Perform version control and record retention
  - Create and Maintain Workflow and Routing scenarios
  - Set/Maintain System settings
  - Track user activities

- **Tracking.** Workflow supports tracking and auto notifications.

- **Version Control.** Visual eForms Enterprise Server has the ability to automatically control form versions upon revision. The data and signatures can be filled via a specific template and later be retrieved in their original context.

- **Record Retention.** Visual eForms Enterprise Server supports record retention. The retention can be automatic or manual.

- **Reporting.** Visual eForms Enterprise Server provides a mechanism for creating and generating reports. It comes with several pre-defined reports

- **Report.** The report can be generated in an ASCII, comma delimited format usable by any third party software (e.g., Excel, Word, etc.).

- **Audit Trail.** Visual eForms Enterprise Server provides a mechanism to create an audit trail and to generate reports on this feature. The system administrator can monitor and generate reports.

- **Form Categories.** Both multiple categories and multiple user groups with different user accesses can be established.
Development Environment

- **Configuration.** The administration console allows for real-time configuration of the application behavior. In addition to this, SOURCE CODE is provided that allows for full configuration and customization of Visual eForms Enterprise Server.

- **Development Environment.** The web application is developed in ASP and Java Script.

- **Other Products.** No other software products are needed to save, sign, and route a filled form. Visual eForms Enterprise Server comes with all required software.

Requirements

- **Client PC.** For the web application to function properly, the following must be installed on each client PC:
  - Near WYSIWYG HTML Forms: no download
  - Full WYSIWYG Forms: component from 350kb to 650kb depending on the features offered

- **IE.** Visual eForms Enterprise Server supports Windows running Internet Explorer. This allows it to automatically download and install signed components. Supported Versions of Windows and IE are:
  
  Windows 95, 98, Me, NT, 2000, and IE 4.0 or higher

- **Netscape.** Visual eForms Enterprise Server supports Windows running Netscape. This allows it to automatically download and install plug-ins. The administrator can configure this to happen manually by the user. Supported Versions of Windows and Netscape are:

  Windows 95, 98, Me, NT, 2000, and Netscape 4.0 or higher

- **Mac, Unix.** The client PC can be a Non-Windows PC. Forms are presented in HTML to this group of PCs.
• **Minimum Server Requirements:**

  Pentium® II 300 MHz, with 256 MB RAM, 10 MB available hard disk

  One of the following operating systems:

  • Microsoft Windows 2000
  • NT Server 4.0 SP 4
  • Solaris 2.6, 7 & 8
  • Variety of Linux distributions
  • AIX 4.3.3
  • HP-UX 11.0

• **Database Requirements:**

  Microsoft SQL Server 6.5, 7.0, or 2000, Oracle® 7.3 or 8.0

• **Messaging:**

  Microsoft Exchange 5.x, Lotus Notes® 4.5 and 4.6, Novel GroupWise

• **Application Development:**

  Windows 9x, 2000, Me or Windows NT

  Web Server: Microsoft IIS 4.0

• **Minimum Client Requirements:**

  Pentium® 75 MHz, with 64MB RAM, 1 MB available hard disk for WYSIWYG forms, and no hard disk requirements for HTML forms.

  Web Browser: Microsoft Internet Explorer 4.x, Netscape Communicator™ 4.x, Netscape Navigator® 4.x

• **Supported Forms Formats:**

  HTML and Visual eForms file format. In addition, FormFlow 1.x, 2.x, OmniForm 4.0 file formats are supported after an import to Visual eForms.

**Architecture**

• **Supported Languages.** Visual eForms Enterprise Server is internationalized and supports multi-byte character set.

• **Windows Addressing Architecture.** Visual eForms Enterprise Server is 32 bit.
• **Minimum System Requirements.** Meet the minimum system requirements.

• **Web Application Components.** Following is a detailed list of modules that are integrated and/or separately integrated parts of the Visual eForms Enterprise Server:

  Designer, Toolbox, OCX and Plug-in filler components, Converter for FormFlow, OmniForm, PDF, Word, etc., Database Component, Off-Line processing installable, Enterprise Server source code, audio component.

• **Scalability.** Visual eForms is a thin client that can integrate with other applications. It can be used to develop web-enabled applications (both client-side and server-side) as well as desktop applications. It can be used within all 32-bit applications and development environments capable of embedding COM objects. This includes: ASP, JSP, Cold Fusion, Perl, HTML, Lotus Notes, VC++ Apps., VB Apps., Delphi Apps., FrontPage and many more.

• **Open architecture.** Visual eForms uses XML, ODBC, LDAP, SAPI, PKI, HTML, and DHTML among others.

• **3rd Party Integration.** Visual eForms can integrate with any email, DB, eCommerce, or document management system provided by other vendors.

• **Thin client.**

  Near WYSIWYG HTML Forms: Zero kb

  Full WYSIWYG Forms: Only 350-700kb

• **Printer/Fax independent.** Visual eForms is device independent. It supports all output devices, including Printers, Fax and monitors.

• **Zero client administration.** The first time users access a form all necessary components are installed on the client PC. Additionally, users can select to manually download and install the components.
Designer

• **Visual eForms Designer.** Visual eForms is equipped with Visual eForms Designer used for WYSIWYG design of electronic forms. It offers the following functions:
  - unlimited number of fields on any form
  - quick field-to-field response time
  - copy/cut/paste of one or more objects
  - underline, bold, italic in a single text field
  - mixed fonts in a single text field.
  - choice of inches, centimeters, or points for measurements of objects.

• **Database support.** Users can build database relations via the relation builder within the Designer.

• **Duplicate Field Feature.** Visual eForms Designer has duplicate field and multiple field features where both the number of replications and vertical/horizontal offset can be set.

• **Currency.** Visual eForms Designer supports multiple currency symbols and formats and various negative and positive formats.

• **Guideline Feature.** Visual eForms Designer provides guidelines to assist in the positioning of objects and fields.

• **Field Help.** Visual eForms Designer has a feature for defining field help.

• **Section 508.** Visual eForms Designer is Section 508 compliant and requires no additional software.

• **Field Labels.** Visual eForms Designer allows for automatic and manual placement of field labels on the inside or outside of a field.

• **Automatic Error Checking.** Visual eForms Designer can define validation rules for field input. Error notification will be presented to the person filling the form.

• **Alignment Feature.** Visual eForms Designer has an alignment feature that will align fields and other information such as text and objects. It aligns to top, left, bottom, right, middle, and center.

• **Same Width/Height.** Visual eForms Designer supports same width and same height in order to set the width and/or height of several fields to the same size.

• **Select Special.** Visual eForms Designer lets users select objects by specified types. For example, you can select all the MASK and CHECKBOX objects with one click.
• **Find/Replace.** Visual eForms Designer offers a search feature that replaces specified text throughout the form. This feature works as it does in a word processor.

• **Spell Check.** Visual eForms Designer provides support for spell checking. Spell check runs through all objects of the form and performs a spell check. If user has selected objects, spell check will run through the selected objects first.

• **Insertion Point.** Visual eForms Designer lets you change the visual display of a field. User input is placed directly on the form. Therefore, the form can be designed to capture user input in any shape or form.

• **Print Preview.** Visual eForms forms are 100% WYSIWYG.

• **Multi-Part Form Support.** Visual eForms lets you design multi-part forms.

• **Default Properties.** Visual eForms forms lets you set default properties for all objects within the designer.

• **Line Spacing.** Visual eForms lets you set different spacing between text lines (i.e., single, space and a half, double) on an individual-field basis. This feature can be set as default for all objects.

• **Text Spacing.** Visual eForms allows for different spacing between characters (i.e. normal, expanded, condensed, fixed spacing). Text spacing can be applied to all objects of the form, one field, or to selected text within a field. Default spacing can also be set for all objects.

• **Security.** Visual eForms allows for locking of forms using a 10-character password. Locked forms can be unlocked if the proper password is provided.

• **Integrated Testing Environment.** Moving between Designer and Filler is controlled by a single button. The Designer and Filler are integrated, so another program is not required.

• **Images.** Visual eForms provides support for bmp, wmf, tif, jpg, pcx, eps, and png image formats.

• **Image Insertion.** Visual eForms Designer supports both Linked and Embedded methods for inserting images into the forms.

• **Drawing Accuracy.** Visual eForms Designer provides drawing accuracy at 1000th of an inch (or its equivalent for the metric or point system).

• **Field Tabbing.** Visual eForms Designer allows the person designing the form to change the tabbing order of fields.

• **Conditional Tabbing.** Visual eForms Designer allows for conditional tabbing to be defined on a form in order to bypass specific fields.

• **Table.** Visual eForms Designer has a table object.
• **Field Data Types.** Visual eForms Designer supports these types of field objects:

  Text, edit, number, droplist, checkbox, currency, mask, editable image, barcode, digital signature, button, date and table.

• **Checkbox Size.** Visual eForms Designer imposes no limitations on the size of the box.

• **Checkbox Grouping.** Visual eForms Designer lets you group checkboxes together so only one entry can be made within a predefined group.

• **Radio Button Field.** Visual eForms Designer allows radio buttons to be defined for a field. Radio buttons can be grouped together so only one entry can be made within a predefined group.

• **Object Rounding.** Visual eForms Designer contains a feature for rounding object corners.

• **Borders.** Visual eForms Designer supports individual control of all borders.

• **Long File Name.** Visual eForms Designer supports long file names.

• **Field Name.** Visual eForms Designer allows for up to 64 characters of any type to be used in the name of a field.

• **Calculations.** Visual eForms Designer contains a calculation builder complete with a set of pre-defined functions and operators.

• **Form Conversion.** Visual eForms Designer can export into HTML and PDF file formats.

• **Designer Expertise.** Familiarity with Microsoft Office or any existing Form Design application is sufficient to quickly learn Visual eForms Designer.

• **Digital Signature.** Visual eForms Designer supports various types of digital signatures and allows for multiple digital signatures to be added to a form. For example, you can define a hand signature in one field and Verisign in another.

• **Barcode.** Visual eForms Designer supports barcode objects.

• **Color.** Visual eForms Designer supports an unlimited number of colors for text, lines, and object backgrounds.

• **Import Formats.** Visual eForms Designer can import these formats:

  Visual eForms, FormFlow 1.x & 2.x (locked or unlocked), PerForm Pro, OmniForm 4.0

  Other formats are supported through the print driver conversion.
• **Export Formats.** Visual eForms Designer can export in these formats:

  ASCII, HTML, PDF (using the PDF writer)

  Both import and export features are included in Visual eForms Designer. No additional software is needed.
Connectivity and Integration

- Visual eForms has a Software Development Kit (SDK) called Visual eForms Toolbox for connectivity and integration with 3rd party components of software. Visual eForms Toolbox contains DLL, OCX, and Plug-ins.

- **Document Management.** Visual eForms Toolbox provides support for various document management software.

- **FileNet.** Visual eForms Toolbox can interface with FileNet products such as IMS 3.5 and IDM 3.0 and higher.

- **Search/Retrieval.** Visual eForms Toolbox can perform a contextual search on a blank and/or filled form.

- **Document Management Systems.** Visual eForms Toolbox can be integrated with a document management system or any 32-bit application that has a published API or can interface an OCX or DLL.

Merge

- Visual eForms has a Merge software program (Visual eMerge) that can merge data from different sources with electronic forms in a batch mode.

- Visual eMerge works with data from SAP, Oracle, SQL Server, SYBASE, or any data source and supports the following:
  
  - **Table overruns.** Table overruns are moved into a separate page, which is replicated until all overrun data is processed

  - **Envelope Stuffers of all types.** The OMR marks that are placed on each page of a printed form are fully configurable. You can also set the position of the OMR marks on the printed pages.

  - **Archiving of the printed forms.** Visual eMerge can produce a PDF version of the form, complete with indexing or a TIFF, which is then fed to the FileNet Document Manager.

  - Visual eMerge can Fax all the merged forms to any Fax driver. Visual eMerge comes with its own Fax driver, which eliminates the need for additional software.
Database Support

- Visual eForms has a database component named Visual eForms Database.

**Databases Supported.** Visual eForms Database supports these databases:

- Dbase, Access, Oracle and SQL server, Sybase, or any ODBC or JDBC compliant database

**Data Relationships.** Visual eForms Database can build one-to-many and one-to-one relationships for the supported databases from within the designer.

**Data Linking.** Visual eForms Database can link a field on a form to external database sources to allow for reads, writes/adds, searches/queries, updates, and deletes for records.

**Data Linking (GUI Tools & Query Wizards).** Visual eForms Database relationships are built using graphically-based data/database linking tools.

Application Development

- **Development Language.** Application development using Visual eForms is easy. Development languages include Cold Fusion, ASP, JSP, Perl to Visual Basic, Java Script, VB Script, Visual C++, and Delphi.

- Visual eForms is available in 16-bit DLLs, OCX and Plug-in packages.

- **Event Triggers.** Visual eForms generates many event triggers, such as the following:

  - **Click** - When a user clicks into a field
  - **Modify** - After a user modifies a field
  - **DblClick** - When a user double-clicks into a field
  - **GotFocus** - When a field is focused by tabbing or clicking into it.
  - **LostFocus** - When a field loses its focus by tabbing out of it or clicking into a different field.
  - **MouseEnter** - When the cursor enters into a field
  - **MouseExit** - When a user exits a field
  - **Calculate** - When a calculation is to be performed
  - **OnChar** - When a user enters a character into the field
  - **PageChange** - When a user moves from one page to another
Web Development

- **Form Distribution.** Visual eForms forms can be deployed and accessed via an Intranet web site without having to download the form template to the user’s PC.

- **Web Servers.** Visual eForms is supported by all web servers.

- **Web Printing.** Visual eForms handles form printing to any printer accessible and available on the user’s PC.

- **Browser Plug-Ins.** The Visual eForms Plug-in is available for Netscape users. The Plug-in works exactly like ActiveX and provides all the functionalities and features explained previously.

- **Design Tools.** Visual eForms Designer can be used for “thick client” as well as “web-based thin client” forms.

- **HTTP/MIME.** Visual eForms supports HTTP/MIME for the electronic submission of forms.
Frequently Asked Questions

Q. How does Visual eForms Enterprise Server comply with Section 508 of the American with Disabilities Act?

A. Visual eForms Enterprise Server provides section 508 compliance by adding text-to-speech tags to the form objects (in the form designer) and then processing these tags via its audio component at runtime. Cerenade offers three distinct Audio components: Active Disability Component, SAPI Component and JAWS Component.

- **Active Disability Component.** This component is only 50kb in size and is developed on top of MSAA (Microsoft Active Accessibility). It supports all Accessibility hardware and software devices including JAWS, WindowEyes, Vocal-Eyes, Screen Enlarger, Screen Review, Voice Input and Keyboard Enhancement programs and utilities. For a complete list of the supported products, visit: [www.microsoft.com/enable/products/aids.asp](http://www.microsoft.com/enable/products/aids.asp).

- **SAPI Component.** This component is only 31kb in size and communicates through Microsoft SAPI. It works stand-alone and requires no other software to be present on the user’s PC.

- **JAWS Component.** Visual eForms Enterprise Server can directly interface with JAWS. The component is provided by Henter-Joyce, Inc. (the providers of JAWS for Windows) and works ONLY with JAWS screen reader product.

Regardless of the audio component users decide to work with, Visual eForms Enterprise Server handles all necessary audible user-interfaces. These interfaces include the following:

- guiding the user as he/she traverses through the fields
- reading out data as it is typed into the fields
- announcing field-specific information based on the field type to assist the user in better understanding and navigation through form objects (e.g., when the user moves into a checkbox as opposed to a date field or a currency field)
- helping the user quickly find the location of the text to edit
- positioning the user’s focus on the toolbar buttons as the user tabs out of the first or last field of the form

Other considerations such as Zoom capability, support for Braille Displays and no use of frames are also supported by Visual eForms Enterprise Server.
Q. How does Visual eForms Enterprise Server support XML?

A. Visual eForms Enterprise Server is XML compliant. Currently, Cerenade supports W3C’s Cascading Style Sheet (CSS) standard to represent a form in an XML format. Cerenade provides a standard XML Document-Type-Definition (DTD) for representing form-data. Conversion from Cerenade’s DTD to other DTDs can be easily achieved using current XML transformation utilities such as XSL. Note that W3C is currently working on new standards such as XFORMS which at this point is considered a work-in-progress; Cerenade is actively participating in the formation of these standards and as this work-in-progress is adopted as a standard and recommended by W3C, Cerenade will provide built-in support in Visual eForms Enterprise Server for such standards.

Q. What Digital Signature standard does Visual eForms Enterprise Server support?

A. Cerenade’s solution provides for both Server and X.509 certificate authentication. In addition, Cerenade is currently working with DoD’s Joint Interoperability Test Command (JITC) to acquire DoD PKI interoperability certification for Visual eForms Enterprise Server. Visual eForms Enterprise Server also supports many other forms of digital signature such as Hand Signature (the ability to draw signatures as you would on a paper form using a Mouse or a Pen-Mouse device), Entrust and NT Domain (authentication is done using username/password pair of the user as it exists in the NT Domain Controller). Visual eForms Enterprise Server support for Entrust has been verified and approved by Entrust Technologies.

Q. How is the field-locking mechanism used for Digital Signatures?

A. Visual eForms Enterprise Server provides locking of the form fields at both the Design level and the Application level. The following options are available in the product:

- **Form Level Locking:** The Form designer can assign form fields to a Signature field. This turns the “Lock When Signed” flag to ON. At runtime, once the user signs the Signature field, all form fields associated with that Signature field will be locked.

- **Application Level Locking:** The Form designer can assign form fields to a Signature field while leaving the “Lock When Signed” flag OFF. At runtime, the application has the option of locking these fields or leaving them unlocked when the user signs the Signature field.

Regardless of how the locking of form fields are handled, the form can have an unlimited number of Digital Signature fields equal to the number of form fields. One can even mix different types of Digital Signature in the same form.
Q. Does Visual eForms Enterprise Server provide Routing?

A. Visual eForms Enterprise Server provides ad-hoc routing, system-wide routing, and user-defined routing:

- **Ad-hoc Routing.** Requires no maintenance. The user selects/assigns the intended recipient at the point when he/she is ready to e-mail the form to the next person in the workflow process. Note that assistance is given to the user to find the exact e-mail address of the recipient by enabling the user to search the mail directories of their mail-server available in the organization. This is achieved through transparent LDAP queries to the mail-server.

- **System-wide Routing.** This type of routing is defined at the server-level. Users can select from a list of pre-defined routing scenarios when emailing forms. The System administrator maintains the routing tables.

- **User-Defined Routing.** The user defines his/her own routing scenario and maintains it.

Visual eForms Enterprise Server uses email as its transport method. Note that the mail is composed and sent via an SMTP service on the server side, thereby removing any dependency on the mail service. Also, in order to reduce bandwidth usage, provide additional security, and remove any dependency on any particular e-mail client program, the composed e-mail does not contain the form as an attachment; rather, the reference to the form is achieved via a URL link embedded into the body of the e-mail. It should be noted that should the user choose to send the form as an attachment, he/she does have the option of doing so.

Q. What operating systems are supported by Visual eForms Enterprise Server?

A. Client operating systems include: MS Windows 95, 98, Me, 2000, and NT. Server operating systems include: Windows NT, 2000. With the use of ChiliSoft, Visual eForms Enterprise Server can be deployed on servers running Unix, Linux, HP-UX, Solaris, and AIX operating systems.

Q. How does the database connectivity supported by Visual eForms Enterprise Server work?

A. Visual eForms Enterprise Server primarily provides this connectivity on the server side via an ODBC interface to all ODBC compliant database management systems (e.g., Microsoft’s SQL Server or ORACLE). This method provides full security in addition to removing the reliance/dependency to database components/setup on the client side. It should be noted that should the user choose to connect to the intended data source on the client side, support for that is provided as well via the product’s local database component which is built on top of Microsoft’s DAO.
Q. **How does Visual eForms Enterprise Server address the needs of users with limited or no web access?**

A. Visual eForms Enterprise Server provides the following solutions:

- For users with no access to the web - Visual eForms Enterprise Server provides support for batch Printing/Faxing of groups or categories of forms. The request for batch Printing/Faxing is issued on the client side and processed on the server side where access is provided to all local and remote printers in addition to a Fax Server.

- For users who prefer off-line processing - Visual eForms Enterprise Server includes an installable setup, which provides support for off-line processing. The offline capabilities allow the user to Open, Fill, Fax, Print, and Save forms (as a single file or to a database). The user will have the option of synchronizing his/her local data with the server whenever an online connection to the server is established.

Q. **What types of databases are supported and what is the data format?**

A. In addition to interfacing with all data sources on the server side via ODBC connections, Visual eForms Enterprise Server provides access to all form data in an XML format. This XML data can easily be exchanged with all other data sources that are XML capable. Additionally, if the user opts to interface with databases on the client side, all data sources supported by Microsoft’s DAO (such as Access, Dbase, Excel, SQL Server, and Oracle) are accessible.

Q. **Can I import my dbase and Access data saved using FormFlow forms into Visual eForms Enterprise Server, and what is necessary to perform this task?**

A. Visual eForms Enterprise Server provides local database connectivity as well as server database connectivity. The local database connectivity automatically connects the user to the database(s) created in FormFlow as soon as the user opens a form. Supported local databases include: Access, Dbase, Excel, SQL Server, and Oracle.

Other functions include: record retrieval, modify, save, delete, and synchronize. Once the synchronize button is clicked by the user, the local data is moved to the server and is synchronized with other user data on the server.
Q. What are the Bandwidth limitation and variations?

A. Visual eForms Enterprise Server is inherently designed to support both high-speed and low-speed access users. The amount/size of data exchanged between the client side and the server side has been kept to a minimum in order to achieve acceptable response time for low speed connections. There are four pieces of information that are exchanged between the server and client: **Filler Component, Form, Data, and Requests/Commands.**

- **Filler Component (optional):** There is a one-time download and self-installation of the Filler Component from Server to Client. The download size is between 350kb and 650kb. On a 28.8kb modem this download and auto-installation will take 2 to 4.5 minutes. Visual eForms Enterprise Server also provides for an HTML/Cascading Style Sheet representation of a form for situations where zero-component download is desired.

- **Form:** Form sizes are on an approximately 40-bytes per-object basis. For example, the size of a condensed 4-page form with 500 objects is approximately 20kb. On a 28.8kb modem this download will take about 7 seconds.

- **Data:** The time that it would take to transfer the data back and forth between the form and the server is totally dependent on the amount of data the user has typed into the form. On a 28.8kb modem the system can transfer 2.8kb of data per second.

- **Requests/Commands:** Typically, request and command messages exchanged between the client and the server are so small in size that they are not considered a factor in throughput/bandwidth requirements.

Q. Are the forms supported by Visual eForms Enterprise Server WYSIWYG?

A. Forms designed or converted into Visual eForms are 100% WYSIWYG. Visual eForms Enterprise Server provides a conversion program that automatically converts all forms created in FormFlow and OmniForm to Visual eForm’s format. This conversion takes place at the binary level by converting all objects and their properties with a very high level of accuracy resulting in forms that look and behave exactly the same as their original counterparts. For forms designed from scratch, Visual eForms Designer allows for creating exact replicas of your paper forms with the ability to place form objects at a resolution of .001 inch. We also provide a print driver for converting paper and electronic forms designed in products other than FormFlow and OmniForm to Visual eForms format. This conversion process greatly reduces the time required to design a form from scratch.
Q. Are industry standard print drivers supported for printing the forms? Do the printed forms match exactly their electronic counterparts?

A. Visual eForms is designed to be 100% device- and resolution-independent. This means that forms are displayed, printed, and/or faxed with the exact same look as they were designed, regardless of the type or resolution of the output device. All devices supported by Microsoft Windows are supported by Visual eForms.

Q. Can the Design tool (Visual eForms Designer) create tab order, calculations, validations, lookup lists, buttons, graphics, advisory notifications, and help notes?

A. Visual eForms Designer provides a rich set of features and functions for designing intelligent forms. Supported features in the Designer include but are not limited to:

- **Tab Orders.** Create Tab Orders that allow for a logical navigation.

- **Conditional Tab Orders.** Create conditional Tab Orders that allow the user to skip an unrelated section of the form.

- **Calculations.** Use Calculations to control the behavior of the form and data represented in it (for Example: Change Background/Foreground/Border Color of a field, Hide/Show or Lock/Unlock fields, perform math function, string manipulation, etc.). Overall, there are 24 functions available at the design time that allow for building very simple to very complex intelligence into the forms.

- **Validation.** Visual eForms Designer supports validation for all of its editable fields.

- **Lookup Lists.** Lookup lists can include any number of items. The size of the drop-list field can be independent of the actual size of the selection list.

- **Buttons.** Buttons in Visual eForms can perform certain functions or can notify the application to perform these functions.

- **Checkboxes.** Checkboxes have three states: Empty, On or Off. There is no limit on the size of the checkbox or what type of data it contains. Visual eForms supports square/rectangle as well as oval/circle shaped checkboxes. Radio buttons are variations of checkboxes.

- **Graphics.** There are three types of graphic objects: Embedded, Linked and Dynamic.

  - Embedded Graphic Objects are included as part of the form. Embedded Graphic Objects are static by nature and cannot be changed by the user at fill time. The size of the image is added to the size of the form.

  - Linked Graphic Objects are only referenced in the form, but the actual image file resides outside of the form. This type of image object is primarily used when many forms share the same image (e.g., company
logo shared by a forms library). Since the image file resides outside the form and is shared by many forms, the size of individual forms and the overall disk usage is considerably reduced.

- **Dynamic Graphic Objects** reference external image files; the physical binding of the Graphic Object to the image file is determined by the user or form logic at runtime.

- **Help Notes.** Visual eForms Designer allows for building help notes that can be displayed or read to the user at runtime.

- **Mask.** This feature is used to make sure that data entered by the user is in the exact format required by the application (e.g., a Social Security Number).

- **Notification Messages.** The form can generate notification messages for the following events: click, dbl-click, mouse hover, mouse in/out, character input, page change, lost/got focus, and field-modify. The generated events can be passed to the application for further processing.

**Q. Can Visual eForms Enterprise Server auto-populate forms with the user profile?**

**A.** Visual eForms Enterprise Server allows for auto-population of known information based on database views (i.e., pre-built queries of any data source accessible on the server side) associated with forms. The data populates the appropriate fields on the form before the form is presented to the user.

**Q. Does Visual eForms Enterprise Server support Cut, Copy, and Paste of information in and out of the forms?**

**A.** Visual eForms Enterprise Server allows for standard operations such as Cut, Copy, and Paste of data between the fields on a form and other forms and Windows applications.

**Q. Can the forms be locked?**

**A.** Visual eForms Designer allows the Form Designer to assign a password to the form, which essentially locks the form to unauthorized individuals. Based on configurable logic in the application, all form fields participating in a workflow process (i.e., a form being routed/emailed to individuals participating in a transaction) can be locked as the form is being routed.

**Q. How does Visual eForms Enterprise Server provide access to the database?**

**A.** Access control in the Enterprise Server is achieved based on the identity of the user currently logged into the system. Based on the privileges assigned to each user, the system will determine the extent of the access to the central database. Since access to the central database is provided primarily on the server
side, there is an additional level of security imposed by the server operating system itself. Note that the Enterprise Server also supports Secured Sockets Layer (SSL) for secure communication of the form-data from client to the server side.

Q. What is the size of the client footprint?
A. Visual eForms Enterprise Server gives users two options: Small footprint and zero footprint. Regardless of which option is selected, the administration required by the client PC is zero, and the forms are displayed in a WYSIWYG fashion.

- **Zero Footprint.** This is achieved by presenting WYSIWYG HTML forms to the user. These forms are generated using Cascading Style Sheets (CSS) and are maintained on the server. The drawbacks associated with this type of form are the size of the form, which can run into several hundred kilobytes in some instances, and the limited field types inherently available in CSS.

- **Small Footprint.** The server will download and install a small filler component onto the user’s PC the first time he accesses the web site and whenever a newer version of the filler component is updated on the server side. The size of this component varies between 350kb and 650kb depending on the options (image formats, barcodes symbologies, etc.) made available to the user.

- **Offline Processing.** For Offline-processing the user will have to install a small package containing the offline components and programs.

Q. How does the Routing process operate?
A. Visual eForms Enterprise Server offers a very simple user interface for the purpose of routing. The user clicks on the email button from the toolbar, fills-in the “To,” “Subject,” and “Body” fields of the email and clicks on the Send button.

The “To:” portion of the email can be filled-in any of three ways:

- User knows the address of the recipient and types it in.

- User clicks on the Search button and selects from a list of available recipients in the enterprise’s mail server directory.

- User clicks on the Routing Builder button and selects from a list of pre-defined routing scenarios.

Visual eForms Enterprise Server processes the email request in two ways:

- **Link Only.** By default, the server sends an email message to the recipient(s) which includes a URL link to the form+data and the body of the message. The recipient will then click on the URL link to gain access to the form+data, which resides on the server.
• **Form+Data.** The Sender can request that the recipient should receive form+data as an attachment to the email message.

**Q. Does Visual eForms Enterprise Server provide a facility to link to other applications or publications on the web?**

**A.** Yes. Visual eForms Enterprise Server is an Active Server Page (ASP) application built around Visual eForms Toolbox components (Filler component, Audio component, Database component, etc.). The product can easily be configured to reference other web pages, applications, electronic forms, and publications via simple URLs. Due to the component-based nature of the product’s architecture, integration and interfacing with other applications and products that are open in nature is extremely easy.

**Q. What is the standard data format used within Visual eForms Enterprise Server?**

**A.** Data elements in the forms are maintained in a standard XML format. This provides for a simple and yet powerful mechanism for sharing and exchanging data between elements/components of the Enterprise Server and third-party products.

**Q. Does Visual eForms Enterprise Server provide Spell Checking?**

**A.** Yes. Visual eForms Enterprise Server provides both Server-side and Client-side Spell Checking.
Q. What is Visual eForms Enterprise Server’s Legacy forms strategy?

A. Visual eForms Enterprise Server provides a conversion program that can automatically convert forms designed in FormFlow 1.x and 2.x and OmniForm 4.x to Visual eForms format in less than a second per surface with a very high degree of accuracy and in batch mode.

For Example, 10,000 FormFlow 2.x forms can be converted to Visual eForms in about 3 hours. This process works on both locked and unlocked forms. Once converted, Cerenade’s Form Designers will examine all of the forms for Quality Assurance purposes. The Quality Assurance phase is a quick process and is completed in a short period of time (for example, Quality Assurance for 10,000 forms can be completed within 4 to 6 weeks). In addition, Cerenade will provide all the design, training, installation, development, and demonstration necessary.

**Note:** In the absence of a form converter, which does an effective job of converting all objects and properties in a form, the conversion processes take anywhere from 4 to 8 hours per surface. With a conservative assumption of 2 surfaces per form, the amount of time needed to convert the aforementioned 10,000 forms can take anywhere from 10,000 to 20,000 man-days. This translates to a prohibitive cost (both in terms of money and time) incurred using existing methods of conversion.

Q. How does accessing, viewing, completing, and processing the transaction through standard Web browsers and Web appliances work?

A. The main means of interfacing with Visual eForms Enterprise Server is via standard Web browsers (Internet Explorer or Netscape). This fact applies to both the standalone mode (Off-line) and Internet-connected mode (On-line). The user has a choice of 1) Zero footprint, where forms are presented in HTML format, or 2) WYSIWYG forms, where forms are presented in Visual eForms format. Either way, the user views, fills, prints, saves, and performs all user functions from within his/her browser.

Visual eForms supports mobile devices such as PocketPC and all other devices that support HTML forms.

Q. How does Visual eForms Enterprise Server provide access to existing e-mail directories?

A. Visual eForms Enterprise Server uses LDAP to access the enterprise’s existing email directories. This eliminates the need for unnecessary duplication of email directories.
**Q. Can pre-determined workflow scenarios be created?**

**A.** Visual eForms Enterprise Server provides pre-determined routing and user-defined routing.

- **Pre-Defined Routing.** This type of routing is defined at the server-level. Users can select from a list of pre-defined routing scenarios when emailing forms. The System administrator maintains the routing tables.

- **User-Defined Routing.** User defines his/her own routing scenario and maintains it.

**Q. Does Visual eForms Enterprise Server provide user-definable interfaces?**

**A.** Visual eForms Enterprise Server provides a user-profile screen where a user can define a list of frequently used forms, a list of user-defined routing scenarios, or can enable audio for forms, etc.

**Q. How does the dynamically expanding/intelligent fields features of Visual eForms Enterprise Server work?**

**A.** Visual eForms Designer allows you to designate fields that can receive unlimited amount of data by the user. Entered data will simply scroll until the user is done typing. When printed, a configurable addendum sheet will be printed in addition to tagging the fields with excess data on the form and also providing a cross-reference to the addendum sheet. Based on the logic built into the forms, sections of the form that are not required to be filled can remain invisible or non-overwritable to the user, thereby providing the user with fields that are dynamically changing as he/she moves through a particular decision path.

**Q. What about operating systems other than Windows?**

**A.** Client operating systems include Macintosh and Unix. Visual eForms Enterprise Server provides HTML forms and HTML screens with Java scripting, which are supported on browsers running on Mac, Unix, and any non-Microsoft operating systems.