Innovative Integration & Process Management System

Enj's breakthrough integration technology transforms the system integration process. Enj connects existing IT platforms and legacy databases to communicate and transact together. Enj delivers broad functionality efficiently as an open technology, enterprise-wide, integrated Business Process Management Suite (BPMS) of software tools. Pricing is attractive as Enj process configuration requires no code writing.[1] A pilot project on one process is an excellent way to see the system's effectiveness and efficiencies.

Enj is one of a few fully integrated BPMS software products, and the only BPMS product based on open world technologies. Thus, Enj can run on any server platform and database software regardless of programming language. Enj leverages your existing IT platform and database investments.

Enj consists of ten interconnected modules. Coriendo configures each module tailored to the client business process and system integration solution in three simple phases:

1 Model the organization   2 Model the processes   3 Model the interfaces

The 10 configuration steps and related Enj modules:

| Configuration Steps	Enj Module
Step 1 – Model the organization	"Enj Organizer"
Step 2 – Model the processes	"Enj Modeler"
Step 3 – Model the interfaces	"Enj Designer"
Step 4 – Integrate systems & databases	"Enj Ports"[2]
Step 5 – Orchestrate the processes	"Enj Transact"
Step 6 – Establish metrics	"Enj Dashboard"
Step 7 – Prepare reports	"Enj Reporter"
Step 8 – Customize end-user interfaces	"My Enj"
Step 9 – Extend to external parties	"Enj Portal"
Step 10 – Integrate with the general ledger	"Enj GL"

The following pages detail each step and include 'screenshots' to illustrate the configuration process.

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[1] Nominal code writing may be required at front and back ends connecting existing platforms and legacy databases. Enj configuration is object driven to create process flows and data handling in linking systems and databases to communicate seamlessly.

[2] The "Enj Ports" module was selected for two consecutive years by The Linux World Expo as one of the best system integration products.

Step 1 – Model the organization

The first step in automating a process is to use "Enj-Organizer" to define the organizational roles and reporting structure of those specific staff members who will be involved in each process to be automated. Enj-Organizer assigns user roles as appropriate with the design and development of the various processes that will be the components of a system. Enj-Organizer is a dynamic roles-based access model managing in real time when personnel changes occur. Every user receives a unique identifier that corresponds to certain access and activity permissions that they alone have. Any changes in the organizational structure or in the roles of users of the process simultaneously change in profiles, and access and security settings for that user or group of users. This module creates and maintains the organization chart-using drop and drag technology, and maintain role attributes such as location, department, group, project, and their values. A new role can be added by a simple mouse click and then specifying its position in the role hierarchy. Below is a sample screenshot of how this looks in the designer mode.
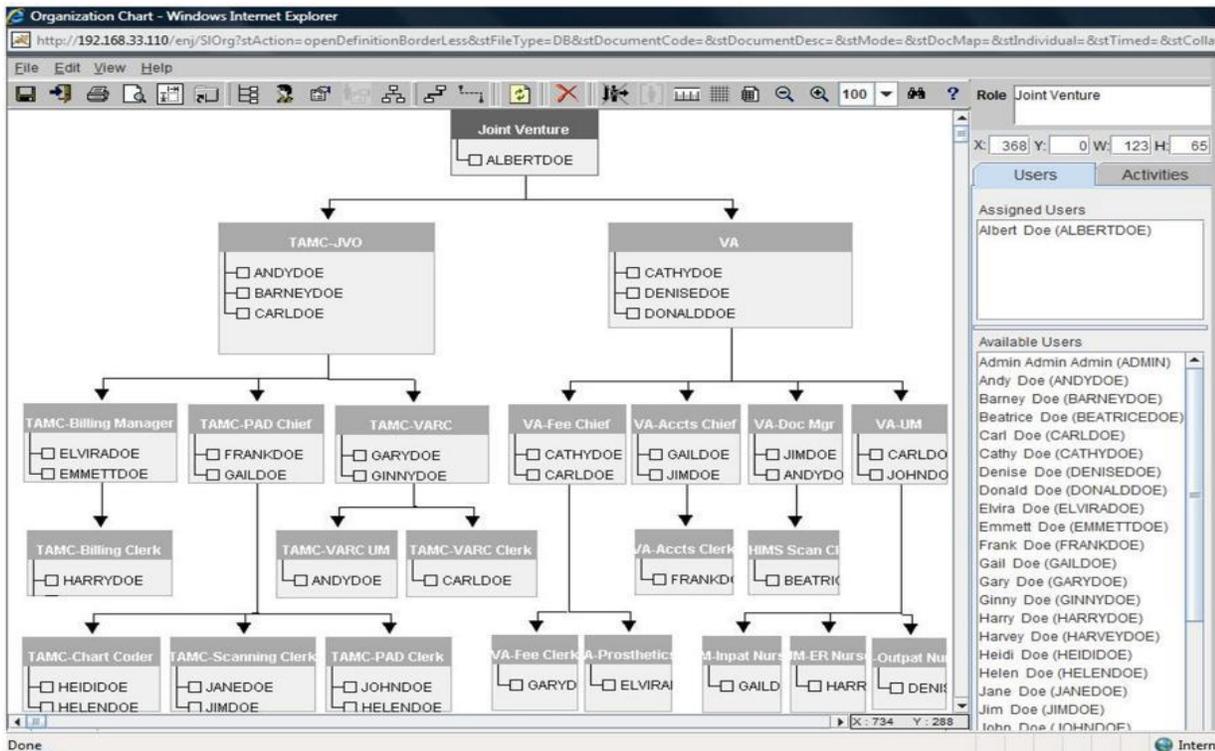
This chart shows the designer view, not the end user view. Configuring the organizational chart is the first step in automating a process. This organizational diagram is a dynamic, live organizational chart that is running on a relational database. Changes to this dynamic organizational chart simultaneously result in the desired change in the way the system operates.

Step 2 – Model the process

"Enj-Modeler" rapidly models the activities performed in each process, and for specifying the business rules which are applied. It contains an intuitive drag and drop interface that is used to rapidly model processes and rules. Other uses include building process models, simulate scenarios, determine, and proactively address process hotspots. It helps capture 'richer' process flow definitions by capturing business rules such as who performs what activities, how and when; and, how transactions flow from one part of the organization to another. Specifications are applied as well to related process and performance attributes, including reminder and authority escalation rules. Below is a screenshot example of the designer view chart.
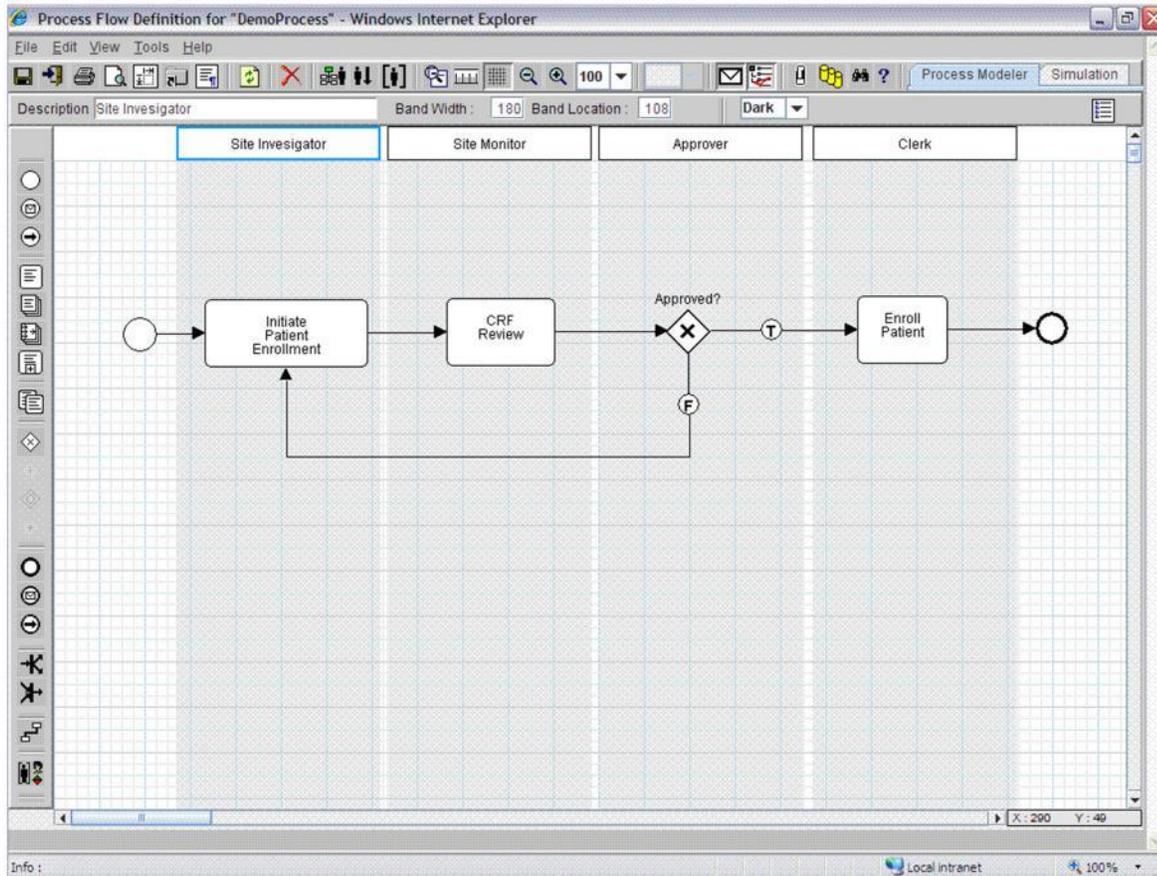

With Enj-Modeler, process configuration is thus a simple task of pressing buttons and dragging objects into place, linking them and defining business rules in terms of formulae. Enj-Modeler as well defines activities and sets human interfaces wherever required. Standard times can be set for each activity and benchmarks established for continuous process performance evaluation and process optimization.

Changes are expedited as the can be performed by an "authorized" administrator without computer programming. Below in red is an illustration of the designer view of how a process modified without the need to write new code.

Step 3 – Model the interfaces

"Enj-Designer" creates digital forms to facilitate human interfaces for each of the processes. It makes it possible to build forms and specify documents, data attributes, and the rules governing the data captured through these human interfaces. Enj-Designer is also a graphical tool making it possible to create forms by pressing buttons and dragging the image into the desired position on the screen. This tool makes it possible to format, set colors and fonts and define properties like item type (number/ character/ date), lengths, and precision. Additional flexibility has also been built in to hide intermediate values and (if required) to set some values as non-database to reduce the load on the operational database. Defining formulae validations and alerts is an easy task. Simple items for text, static lists, complex formulae, and buttons for triggering actions, lists of values for ready referencing, master lookups, returns, and updates can be set at this stage. Below is a designer view screenshot of a sample electronic form created without writing code.
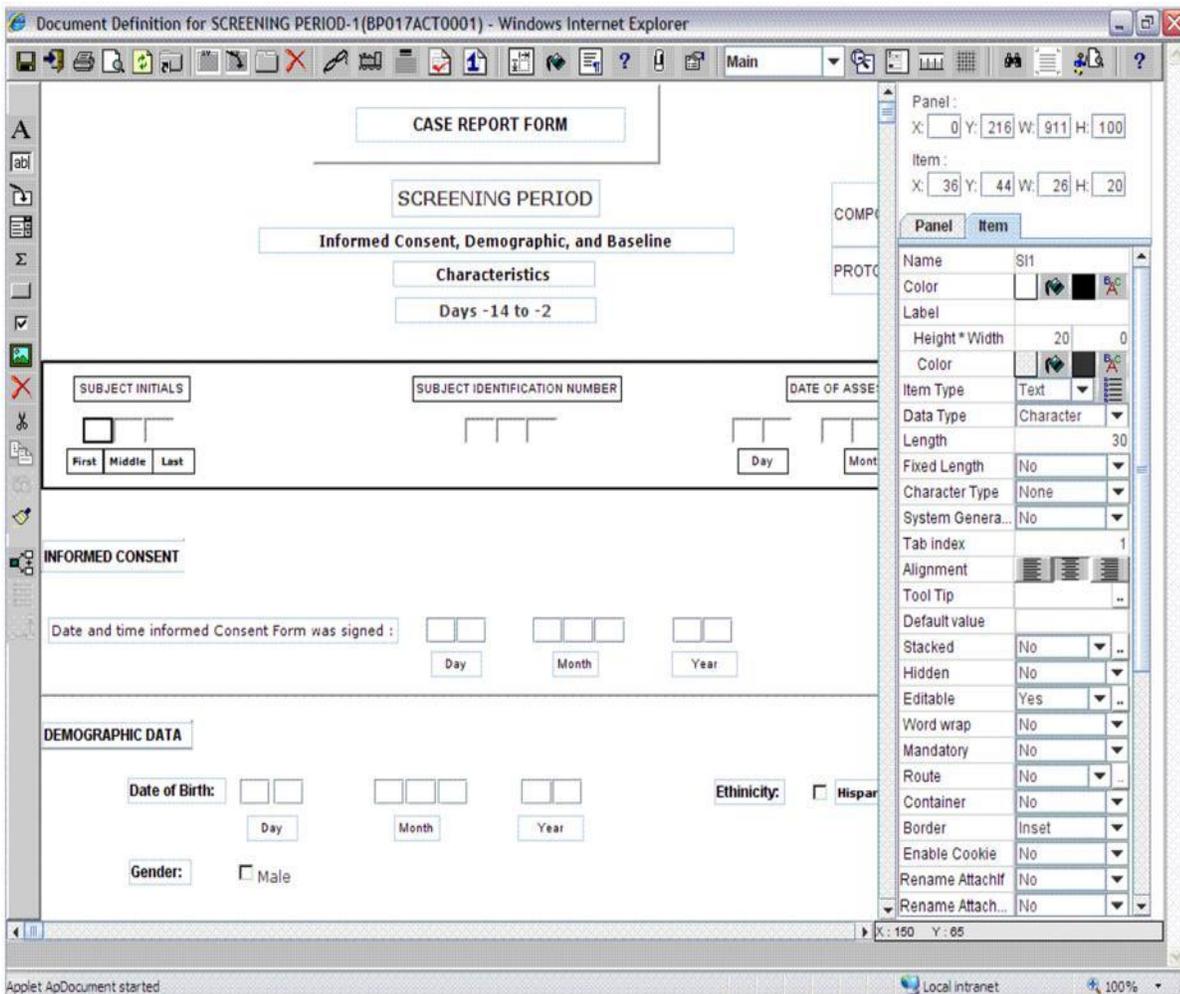
Step 4 -- Integrate systems and databases

"Enj-Ports" can specify data interchange requirements, XML or file standards, frequency, instantiation, and business rules governing this data interchange. Enj-Ports supports all the 3 possible data interchange strategies – direct database access, file exchange, and web services. Enj-Ports has comprehensive features to handle both inbound and outbound data transfers, either in a synchronous or asynchronous fashion. Enj-Ports works in conjunction with the computer systems running in an organization. Enj-Ports can also define the third party interfaces called import, export, and ex-import for each distinct activity. Definitions include file locations, delimiters and file structures, labels and tags as well as the mapping each element is to have with corresponding Enj elements.

While in most cases, import and export are asynchronous triggered by a predefined action, they can run in a synchronous mode taking care of fixed time batch runs to upload and download data. These synchronous activities take the usual difficulties and pain of integration out of system design, making the Enj system fully in mesh with all existing systems, providing the glue that an organization needs to get various silos to work together, seamlessly and efficiently.

Enj-Ports can work with fixed file locations, or it can work equally well with email attachments, so there does not need to be any physical location sharing or networking, thus substantially reducing integration costs over wide networks. Enj-Ports also handles the inter process communication within Enj which allows information to flow seamlessly from one Enj process into another, making it extremely simple to deploy one process and then another, integrating it with the previous one easily and effectively. Enj-Ports makes it possible to configure Enj to work as a data warehouse to receive and store data from a variety of distant client systems. You can also mine the consolidated data mined for numerous reporting needs as discussed in Step 8. Prepare Reports ("Enj-Reporter").

Step 5 -- Orchestrate the process

"Enj-Transact" is the hidden middleware that puts the process, document and data interchange definitions together and orchestrates the steps in each process seamlessly from end to end. As soon as the process and interface definitions are complete, the deployment of the system would be ready to go 'live'. Enj-Transact is the deployment module that has two key functionalities: "Document Manager" and "Messaging Manager". Document Manager manages all the documents process users deal with, linking them to the transactions to which they relate. If an organization already has its own document management system, Enj can to tie-into that system when necessary to access each document relevant to a specific transaction. Messaging Manager, at the back end, takes care of routing the documents as well as generating notification messages that inform users of documents that are awaiting their attention.
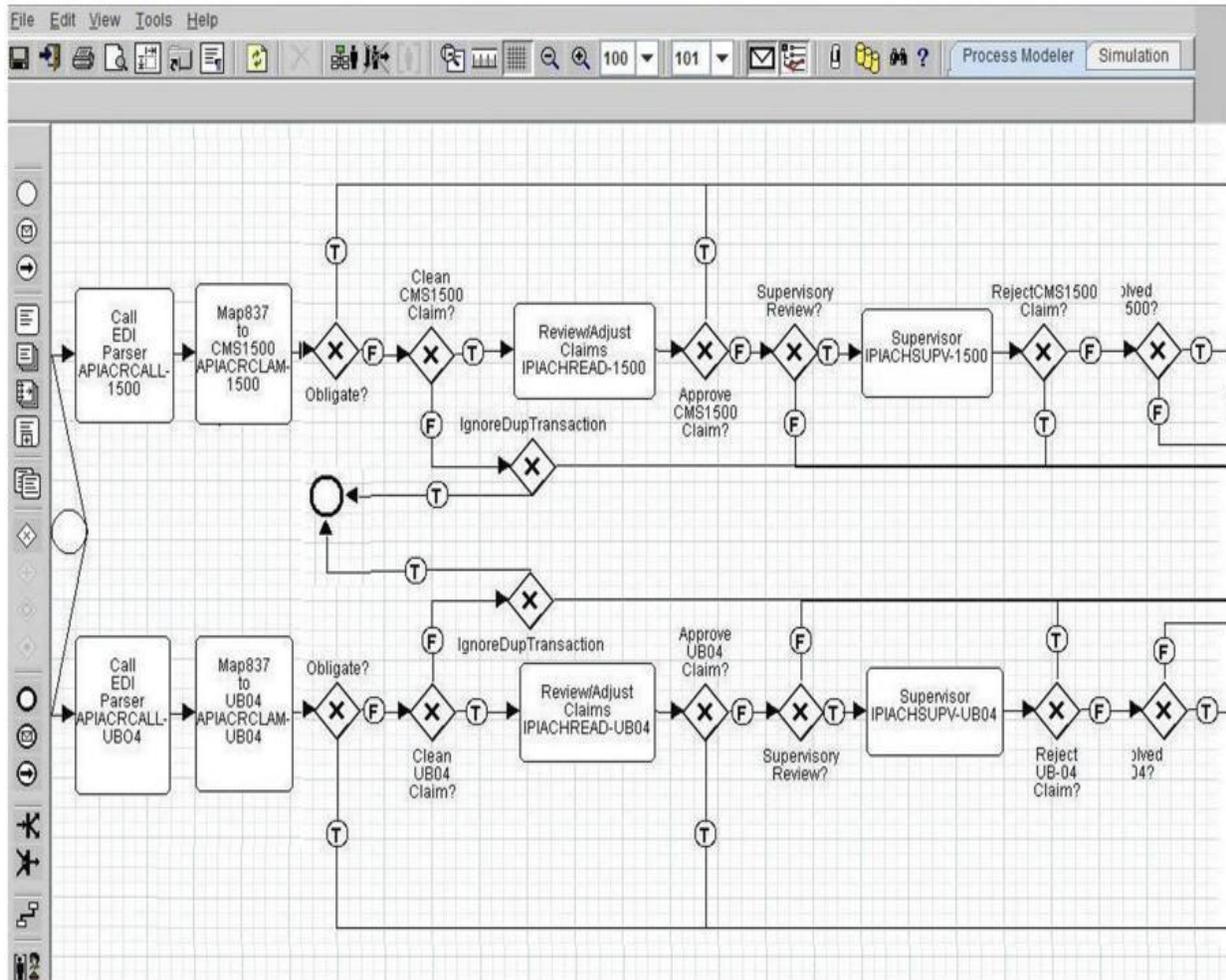
Step 6 --Process metrics

"Enj-Dashboard" helps monitor the status of each process and transaction by collecting, assimilating, and analyzing process metrics continuously. Therefore, process optimization can be an ongoing endeavor. Managers using the Enj-Dashboard module can run system level queries to monitor and track how the system is performing and to identify and optimize bottlenecks in the processes. Each of these queries allows drill-down to the transaction level for timely and effective investigations. Below is a screenshot example of how the "Enj Trace" functionality would look for an end user. Note the display of the date and time stamp for each step in this transaction.

The Enj Dashboard shows how many transactions have passed each point in the process. This gives a quick measure of the pulse and utilization of the system, as well as how many transactions are pending at each stage. This gives a measure of the bottlenecks and a quick indicator of the activities that need optimization of resources allocated to them. System performance queries give overall performance benchmarked against standard times assigned at the time of process definition. This information is vital to streamlining the process, speeding up slow activities, and reallocating resources so that the process is balanced and there is no bundling up of transactions. All reports are available either in tabular form or in easy to visualize graphical form.

Step 7 -- Prepare reports

"Enj-Reporter" has extensive reporting, report scheduling and distribution features that make it possible to set up custom reports for each process, and electronically 'deliver' them to the appropriate staff members. Below is a sample screenshot displaying data in graphical format for end-users.
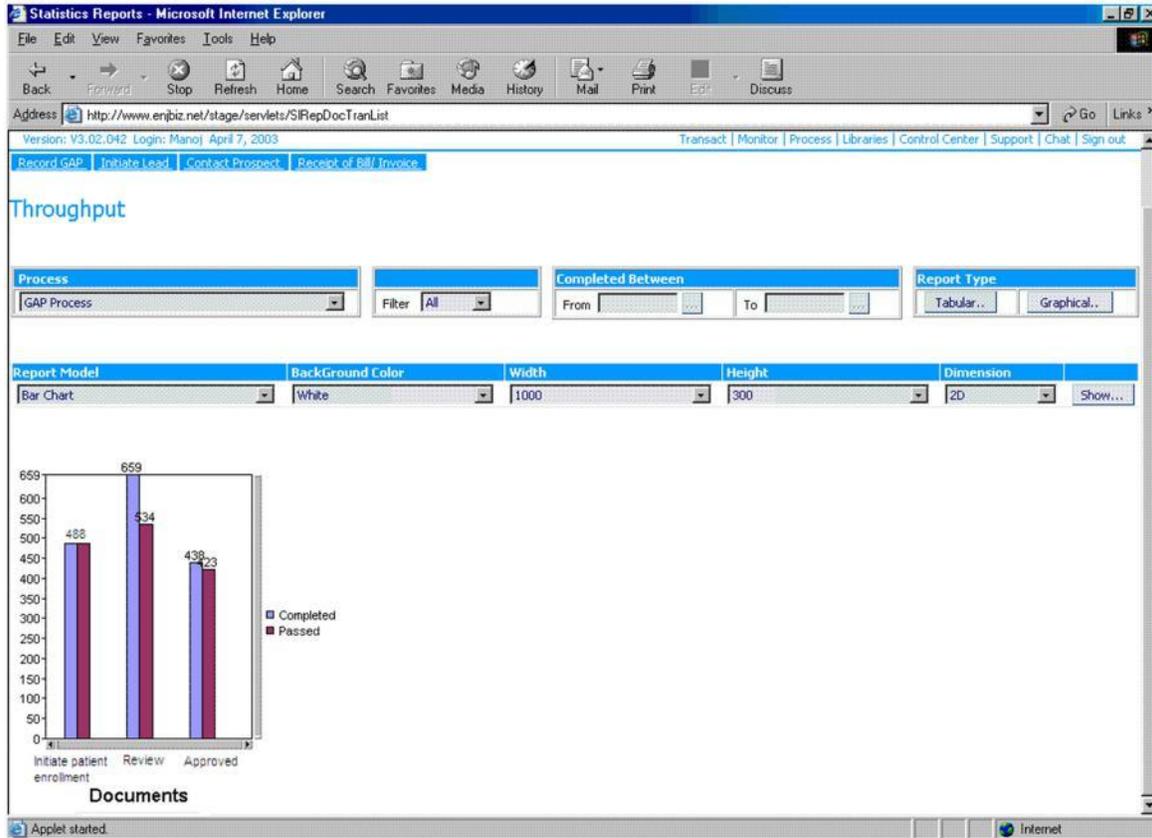
Enj is a customizable platform, and while there are standard reports, most of the reporting is fully user definable as each client's needs require, which also facilitates report modifications.

 Enj-Reporter can create new reports or modify existing reports as needed. Just like other parts of Enj, no computer programming is required to set up and run reports. Due to the nature of information stored in the database, reporting abilities are governed by the role(s) of the user. Users are allowed reporting access only on documents they complete. However, as there may likely be roles by virtue of their position in the organization that require overriding rights, this option can be provided for when defining the process. All reports come up in HTML form on the browser screen. Additionally, most reports are exportable in spreadsheet format for detailed study and analysis.

Step 8 – Customize end-user interfaces

"My-Enj" module used for customizing the end-user interfaces of Enj has an exhaustive personalization module that allows users to customize the look of their Enj desktop. Each user can set the size, font, and color of each of the elements individually and as well, the background colors for various parts of the screen. Users can also change the logos and the header that the screens have to provide for an individual look and feel. This personalization module also allows users to set their default log-in screen, the shortcut links they would like to see for quick access to repetitive actions, set the number of documents they would like to see, set filter and sort options as well as set personal information like time-zone, administrative and functional supervisors and to change their Enj password.

Step 9 -- Enj Portal

The "Enj-Portal" module extend processes to external parties that need to interact with any of an organization's processes. Enj-Portal provide content as desired to the public domain. It has the capability to define and manage an active and dynamic portal, and to link and expose any portion of a process. Enj-Portal integrates content management with process data providing public static, public dynamic and private dynamic content. Enj-Portal helps organizations create their e-strategy and to define and maintain an active and dynamic portal, which links into the database in the background and selectively exposes sections of data as needed. This is done by a creative integration of content deployment, My-Enj and Enj-Reporter functionalities. Enj-Portal divides the content of an organization's portal into one of 3 broad categories - public static, public dynamic, and private dynamic. Enj-Portal has a content manager for public static data, and reveals sections with reports that have set parameters for public dynamic and private dynamic data, i.e. tailor reports in Enj-Reporter with specific parameters, and placed on the portal. Enj-Portal is one of the most efficient and cost-effective ways of building a web portal.
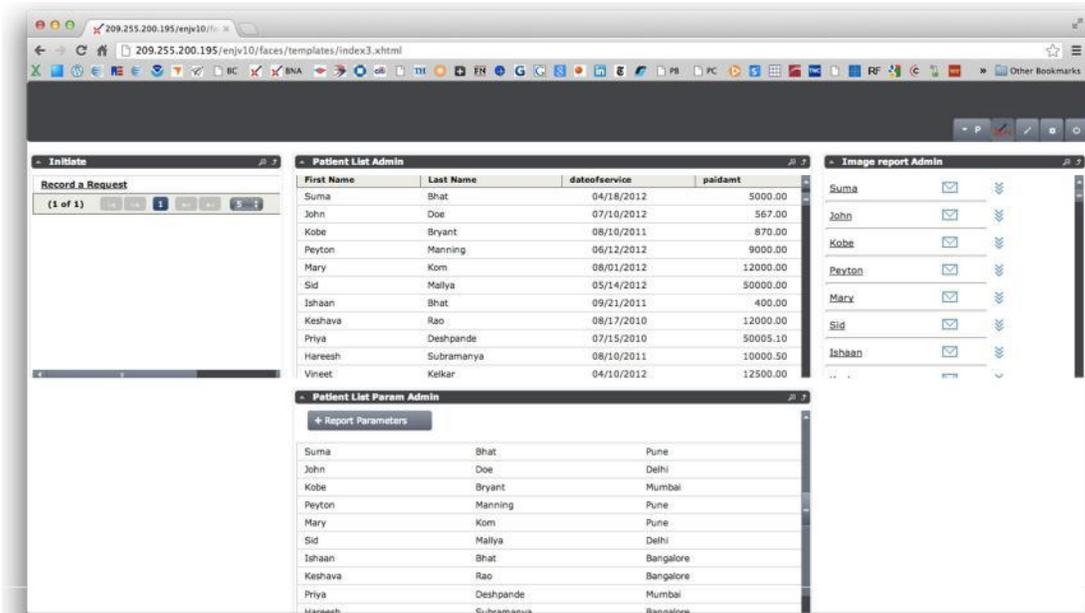
Step 10 –Integrate with the General Ledger

The "Enj-GL" module defines the rules that integrate process transactions with an organization's general ledger accounting system. Enj-GL makes it possible to specify the appropriate accounting procedures and rules for each transaction. This functionality can eliminate multiple data entry and help make the accounting management functions of an organization more efficient.
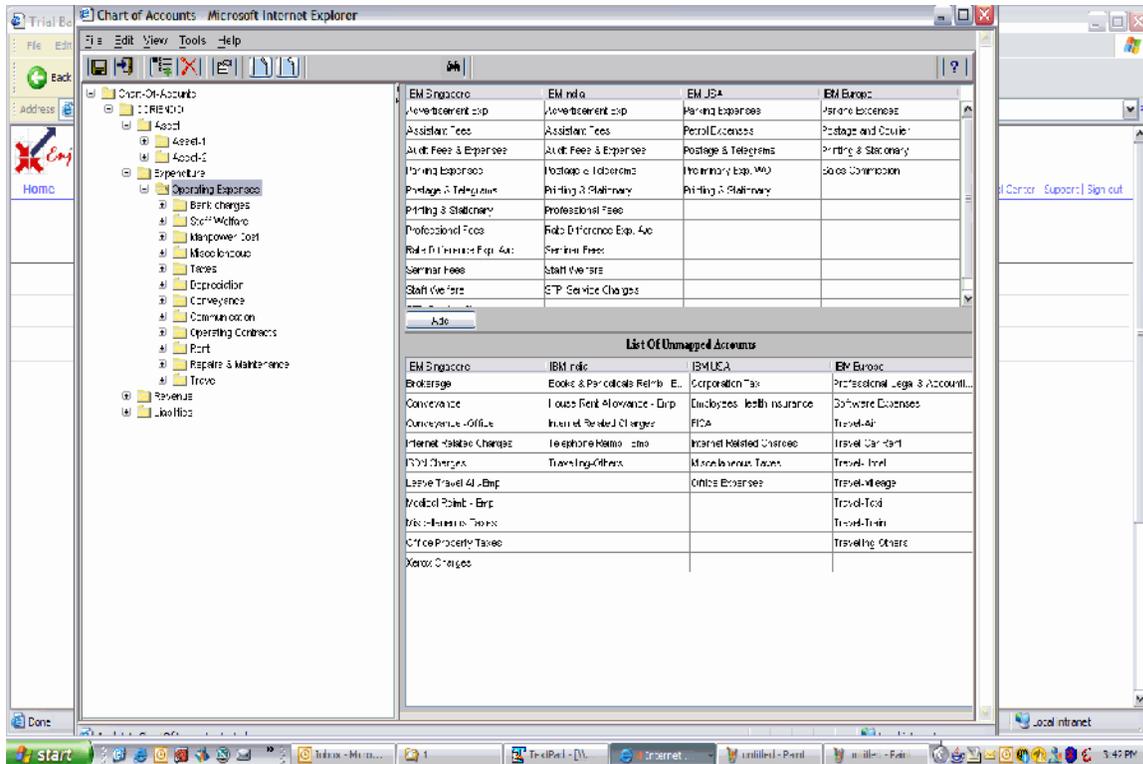
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