10 FirstSTEP and EPC (Interfacing Technologies)

10.1 Address

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10.2 Company Overview

Interfacing Technologies Corporation (ITC) is Headquartered in Montreal, Canada. It was founded in 1985, and originally supplied MRP systems. The MRP systems have been discontinued, and the company is now entirely focussed on its business process mapping, modelling, simulation and management software which was first introduced in 1994, following extensive development. The company is product led, and also provides consultancy in the use of its products. It has 40 employees at its Montréal headquarters, and sells both directly, and indirectly through consultancy partners and value-added resellers. About 70% of revenues come from product sales, and 30% from the in-house consultancy business. The company is privately owned, and does not disclose financial information.

The company's mission is to provide collaboration tools and services to map, model and manage business processes and knowledge. The Enterprise Process Center (EPC), was originally a repository and publishing tool, but has been expanded to provide enterprise-wide business process modelling and content management. FirstSTEP Designer and Charter Desktop products are positioned for entry level projects, stand-alone process mapping, and process simulation. FirstSTEP models can be used in the EPC as required.

10.3 Product architecture and operating environment

Interfacing Technologies process modelling tools comprise:

- The Enterprise Process Center (EPC), a scalable application server which is a multi-user process modelling system and repository
- The FirstSTEP suite:
  - FirstSTEP Designer, a business process modelling and simulation tool running on Windows platforms
  - FirstSTEP Charter, an add-in for Microsoft Visio which employs the FirstSTEP modelling methodology

Data can be moved between FirstSTEP Designer and FirstSTEP Charter and to the EPC.

The FirstSTEP suite includes components that can operate in an integrated fashion or independently to address a wide spectrum of enterprise business process needs. ITC has also extended its process modelling technology for enterprise-wide process management through deployment of web-centred component within the EPC product. The EPC, available since April 2002; is a secure process modelling system and repository designed for enterprises looking to become process-centric and engage multiple users/authors and non-authors. Processes designed and modelled with FirstSTEP can also populate the EPC Process Repository. Process and related content information is available to the desktop of every employee and manager in the enterprise via either the EPC rich client or thin web client interface, or via the one of the FirstSTEP products.

The FirstSTEP products operate on all 32-bit Windows operating systems from Windows 95 to Windows XP. FirstSTEP Charter, the Microsoft Visio-integrated tool, operates with all the latest versions of the Visio products (at the time of writing the latest version is Visio 2003).

The EPC is a J2EE compliant application and web solution running on Application Server applicable to several environments – Windows NT Server, Windows 2000 and Linux. It is scalable to support the needs of wide range of deployment sizes, from smaller business units to global enterprises. The EPC process and knowledge repositories support several relational database types (JDBC). The recommended databases are Oracle and SQL server. A lighter version of the EPC includes its own database. EPC uses desktop Windows workstations for full capabilities, plus thin web browser clients for viewing only using Internet Explorer 5 onwards. Processes are stored in an XML format within the repository.

10.4 EPC, FirstSTEP Designer and Charter

10.4.1 Functional overview

Simple or comprehensive models of the enterprise and its business processes can be created to identify alternative process designs and opportunities for improvement, and to test the impact of change prior to actual implementation.

Based on research that was initially sponsored by the National Research Council of Canada and a consortium of Canadian industry leaders, the FirstSTEP framework is based on six groups of enterprise objects. The concept and approach developed is now the basis for the FirstSTEP product family (Designer and Charter).

FirstSTEP Designer is a business process modelling and simulation tool with time, cost and volume-based performance analysis functionalities. FirstSTEP Designer can perform static or dynamic analysis of process performance, activity costing and resource utilisation, analyse business trends, identify bottlenecks, and generate detailed or summary reports on model components, critical paths and input volume sensitivity.

FirstSTEP Charter for Visio is a business modelling add-on to Microsoft Visio that enables the creation, editing and sharing of process models. The model data can then be transferred to FirstSTEP Designer to take advantage of this product's additional functionalities.

FirstSTEP Charter and Designer can populate the EPC Process Repository using an XML link.

EPC provides both structured and simplified access to processes, process-related content and applications. It is designed to promote collaboration by facilitating the sharing and communication of information organised along a process-centric environment. EPC extends and complements the FirstSTEP process modelling and improvement technology. Modellers can build processes using the full desktop workstation, while viewing Users can access the hierarchy of any top-level process, and drill down to the desired level of detail. EPC enables process, project, client and document management around the organisation's processes.

10.4.2 Modelling language and methodology

FirstSTEP and EPC have not been designed to require use of any particular methodology: they are generally supportive of most methodologies, but, in particular, supports the IDEF methodology if required.

FirstSTEP and EPC can be used for both mapping processes. Mapping consists of laying down shapes in a certain sequence to provide an overview of a process in a two-dimensional approach. Simulation adds a third dimension to the process map in FirstSTEP, quantifying the process at a task level by assigning properties; this simulation capability will be made available to EPC in a future release. The top-level

process (the object of the study) can be broken down into subprocesses as required. The lower (atomic) levels of the model are the individual tasks (work) being performed.

The key feature of a model is the process flow, which is usually built from the top down starting with high-level conceptual objects. A complete process model consists of six basic types of components (objects): processes, activities, materials, organisation groups, roles, and resources. In order to simulate and analyse a model, each model component must also be assigned appropriate properties (name, cost, duration, probability, input/output, etc) which determine how that particular component behaves in the model.

There is a structure-checking facility that validates model integrity.

In FirstSTEP Charter for Visio, an industry-standard diagramming environment is used to quickly incorporate an organisation's process knowledge into high-level models for communication, including publishing on the Internet or Intranet. High-level mapping gives senior management an overall view of processes while lower-level mapping detailed views of processes at various levels of the organisation, as required.

10.4.3 Data import and handling

In addition to import and export capabilities between FirstSTEP Charter and Designer, the products can also export the process models in various formats (XML, CSV, and HTML) enabling the content to be shared with other stakeholders. Interfaces to MS Project and WfMC-WPDL have also been created.

FirstSTEP Charter will convert process maps created in the Visio product alone to the FirstSTEP process modelling standard to leverage already existing user investment in MS-Visio maps.

EPC provides a one-stop access and knowledge acquisition in enterprise processes and documented procedures, such as ISO and ITIL documentation. EPC adds a process driven element to ISO document libraries, bringing these documents within easy reach of the people who need them. It is designed for a collaborative framework, both internal for process and project teams and external across the supply chain. Users can access legacy systems, ERP systems, FirstSTEP model and simulation data, and other information sites.

Modularised FirstSTEP components and third party plugs-ins are tied to an engine that communicates to and from the portal and database. The open architecture is designed to accommodate compatible third party APIs.

The data layer for EPC includes repositories for FirstSTEP models and modelling objects, process standards libraries, and more. It can also access third-party databases. The EPC is designed for scalability and simultaneous multiple-user access.

10.4.4 Ease of use

The FirstSTEP graphical user interface allows easy modelling of envisioned changes. It also has an intuitive and versatile macro-micro modelling approach. FirstSTEP provides all the tools necessary to start evaluating, costing and planning process change.

Users who mapped in Visio will encounter little or no learning curve when using FirstSTEP Charter. Charter uses the Visio interface to employ the FirstSTEP modelling methodology.

FirstSTEP is capable of supporting a spectrum of industries (eg: financial, healthcare, government, manufacturing) due to its template design. Business templates are a convenient way to group common activities, resources, calendars, icons and volume input profiles. FirstSTEP templates can be customised by organisation or by sector.

EPC has an single sign-on integrated with Microsoft Active Directory. EPC presents the user with a myEPC screen, which lists the user's checked-put objects, subscriptions, activities performed, processes participated in, owned processes, and roles. On the left in a scrolling toolbar users can select functions:

- Modelling
- Documents
- Administration

Modelling presents a multi-pane screen, with the processes listed on the left. Selection displays the process map on the right, and seven process component icons for selection to build or modify a process. The top-level process is built first, then drilled down to sub-processes for detailed activities to any desired depth. Interfacing recommend that no more than five to seven levels be used, in the interests of comprehensibility. EPC includes organisation charts, roles, resources, and costs.

Processes can be checked out/in, and all activities are recorded in an audit trail.

The thin, web browser client can be used for viewing processes, including the drill down facility, but no changes can be made. The screen design is a slightly simplified version of the desktop client screen.

There is a discussion group facility for users to discuss process development.

10.4.5 Security

Current FirstSTEP Designer and Charter software is desktop installed and operates with individual modelling files which can be secured by the enterprise assigned user access rights. FirstSTEP offers password access to sensitive models. Group and users level security access are available once the models are transferred to a centralised repository in EPC.

EPC provides managed and guaranteed secure access to corporate information for different user profiles (through access rights management). The management of all process content and related documentation is centralised, with check out/in and full version control.

10.4.6 Version Control

FirstSTEP used without EPC uses the file system on the underlying platform – if there is any third-party version control, then that is used.

EPC includes full version control, with rollback facilities, and an audit trail of all activities.

10.4.7 Integration with other tool types

Export/Import through CSV (and XML export) enables communication with standard MS Office tools such as Word and Excel.

FirstSTEP Designer exports to Microsoft Project.

FirstSTEP Designer and Charter exchange documents between themselves and also with MS Visio.

EPC is aligned with emerging standards such as BPMN and BPEL.

EPC is also being integrated to leading Balance Score Card products

10.4.8 Presentation and reporting capabilities

FirstSTEP and EPC offer extensive presentation and reporting capabilities. The products automatically generate "Swim-lane" views from the hierarchical maps and enable users to employ their own "iconic" standards to enhance and standardise the views.

A reporting facility enables the generation of many analysis reports in table, bar and pie chart views. Users can change the presentation layout, colours, filters, etc, and also export the reports to external tools through CSV export.

FirstSTEP Designer also generates dynamically plotted charts during simulation sessions, as well as animated view of the organisation, resources, tasks and material exchanges.

FirstSTEP Charter takes advantage of the Visio capabilities together with the additional tools offered by FirstSTEP to present the process maps in various views and graphical capabilities. Such presentations can be easily included in other tools such as PowerPoint presentations.

FirstSTEP and EPC use a hierarchical structure in which processes contain other processes and, at the most detailed level, activities. Users can navigate down through the processes to the level of detail needed (or available). This is sometimes referred to as "drill-down" navigation. At the same time, navigational links allow users to follow the flow of materials laterally, from process to process.

This 3-dimensional process information environment is enriched by a facility to store related BPM information, including hyperlinks to other documents, with each object in a model.

Process-mapping allows the graphical definition of core processes, subprocesses and activities. The multilevel breakdown of processes can be viewed graphically or in “smart list” form. To manage the visual complexity of a model, two levels of processes can be viewed simultaneously, processes can be expanded in place (to infinite levels) and easily moved to different levels of the hierarchy. A large model can be divided into several smaller models, possibly developed separately, and then dragged and dropped into a single model to run the complete business simulation. There is no limit to the complexity of models.

Charter software allows users to cooperatively create, view, edit and publish structured process models. View the flow of work across departments with the Process Function View or “swim lanes” which is automatically generated from the process map. Validation tools in FirstSTEP Charter verify the integrity of process models and prepare them for simulation in FirstSTEP Designer. Once in Designer, users can produce information-rich HTML output of their models for the Internet or intranet.

The FirstSTEP Process Converter, a standard feature of the Charter 5.5, converts Visio drawings, composed of shapes from Visio stencils, into FirstSTEP Charter process maps, allowing Visio users to take advantage of Charter’s hierarchical process modelling features.

FirstSTEP’s reporting and analysis facility provides the necessary tools to evaluate the modelled process. Numerous reports are provided on process performance, work flow information, elapsed and waiting times, and resource utilisation both for the enterprise model and simulation runs.

10.4.9 Future enhancements

There is no simulation in EPC, but the simulation capabilities of FirstSTEP Designer will be made available to EPC as a web service. Processes will also be exportable to workflow systems using the BPEL standard.

Other interfaces will be developed to improve integration with other systems, to collect external data for combination with process data and re-export to BAM (business activity monitoring) tools, including Balanced Scorecards and KPIs (key performance indicators).

Support for multiple environments will also be added.

10.5 Examples of user organisations

There are around 400 enterprise clients, among them are some of the leading global enterprises. These include:
Amazon.com, AOL, Bombardier, Canadian Space Agency, Chase Manhattan, Exelon, Gillette, GE Capital Banking, IBM, ING-Corporate & Investment Banking, KPMG (Latin American and Canadian), Petroleum Authority of Thailand, Royal & Sun Alliance Insurance, Royal Australian Air Force, T-Systems, Stora Enso and Unisys.

10.6 Pricing

Single user licenses start at €700 and drop to €100 per user for larger implementations. Typical deployments at team level, including training and initial process deployment services ranges from €15,000 to €50,000.

The FirstSTEP products are licensed as single users with an upgrade path to the EPC.

Interfacing is positioning both the EPC and FirstSTEP products to partner with complementary products to provide bundled solutions.

10.7 Consultancy and support services

Interfacing business consultants, trainers and partners deliver a wide range of professional services at several levels of engagement.

Interfacing offers a range of Process Deployment Services, including: Process Maturity Assessment, Process Framework Deployment, Periodic Audits, Various deployment support for Outsourcing, ITIL, Compliance (Sarbanes Oxley Act, BA-II, etc). Service Products are published on Interfacing's site.

Interfacing offers standard training classes as well as consultancy with a well-structured deployment program.

- Process Modelling techniques, with EPC and FirstSTEP
- A one-day training course in FirstSTEP Charter, targeted at business analysts and executives
- A two-day course in FirstSTEP Designer (modelling and introduction to analysis) targeted at business analysts – only a minority of users take this course
- A two or three day course in the IT and business aspects of EPC, targeted at authors and system administrators

Depending on the client's specific needs strategic, tactical and implementation consultancy services are available, including management and knowledge transfer.

Support is available in different regions:

- North American support centre located in Montréal (English, French, Spanish and German)
- European Support located in the UK, Germany and Czech Republic (English, German Czech, Slovak)
- Asia/Pacific Support located in Australia
- Central and South America Support centre located in Guatemala -- Spanish
- Additional Support centres are added in 2004 and 2005

There is a user group consisting of EPC/FirstSTEP customers including users from Unisys, Exelon, RAAF, Bombardier and other clients.

Figure 10.1 EPC architecture