



convergent technologies

Enterprise Applications and Integration
Web-enabled Open Systems
Wireless and Telecommunication
Video Broadcasting and New Media

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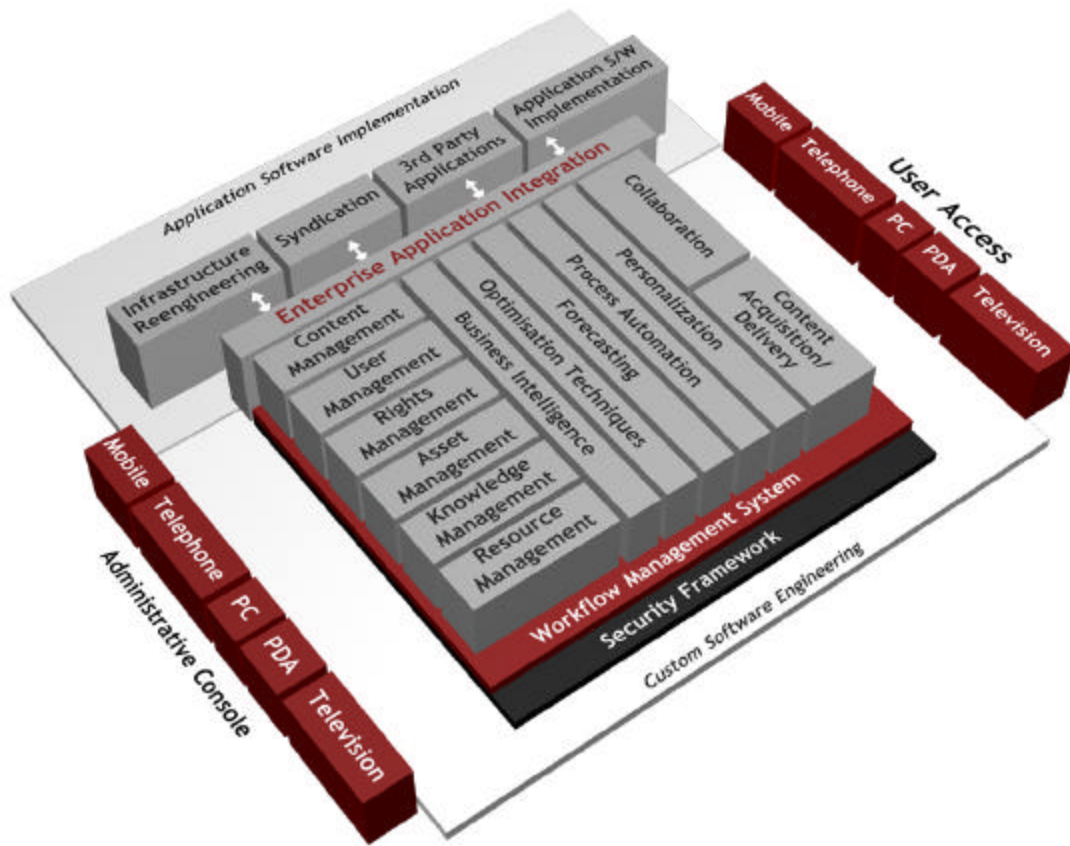
Convergent Technologies was founded with a mission "To Enable Corporations Across the World To Identify Key Building Blocks and Build Flexible, Scalable Solutions With Low Cost Of Ownership"

We help companies leverage, develop and deploy intelligent end-to-end software services.

The four core areas of competence are:

- o Enterprise Applications and Integration
- o Web-enabled Open Systems
- o Wireless and Telecommunications
- o New Media Technology and Video Broadcasting

Our unique range of offerings is designed to provide the flexibility to clients that require a combination of owning, building and outsourcing their technology needs.



When you surround any of our technology offering with other convergence possibilities, you would begin to lay a foundation for a total digital facility, which is our vision for the future.

Convergent Technologies' solution framework facilitate the following:

- o Open Architecture that support Device Independent Content Acquisition/Delivery capabilities which can serve content to Web, Mobile, PDA, Telephone and Television
- o Scalable Architecture to enable Integration of Application with a broad install base of existing Applications, Operating Systems and Devices
- o Build Real-time Information Exchange Applications with Business Intelligence and Forecasting capabilities

These solutions are engineered to significantly reduce the cost of doing business by seamlessly integrating with the enterprise's existing business processes.

Enterprise Applications and Integration

With our competency to handle various user interaction devices (Web, PDA, Screen Phone, Mobile Phone etc.), ability to build complex search engines, Corporate Intranets, Logistics, Process Automation, CRM and SCM, we have the ability to build high-performance, robust and scalable Tools and Services.

Apart from building customized ERP using all kinds of Application Servers and implementing enterprise applications from scratch, we have done Enterprise Application Integration using integration toolkits like WebMethods and Fiorano Tifosi.

Real-time Scheduling System Thomson Press, India

Thomson Press (TP) is the biggest Printing Press in South Asia. As a to improve efficiency/productivity of their multi-location shop floor, TP decided to implement an Automated Scheduling system, which would schedule, control and monitor the activities in real time in/across these locations and keep track of the progress of various printing jobs that are running in real time.

The system implements a proprietary scheduling algorithm. The system is highly memory intensive, handling about 250MB to 400MB of raw data at all the time. The system is implemented on Linux Platform, using C++. The front-end and remote interface is developed using Java, so that the remote clients can connect to the main system over the net, and it is OS independent. The program uses intensive Threading for massive parallel processing and IPC and the remote communication is implemented using SOAP.

Enterprise Application Integration POSCO, South Korea

Convergent Technologies along with Fiorano Inc US and WiNoble Korea developed the Enterprise Application Integration (EAI) solution for POSCO, Korea the world's largest steel supplier. POSCO plans to maximize its operational efficiencies in manufacturing process management, CRM, ERP and SRM packages and its solutions as used by 13 subsidiaries. These packages are integrated using Tifosi - Fiorano's EAI solutions. Its built-in extensibility and standards-based interoperability will help lower risks and costs for the overall solution.

Tifosi is a distributed Services Integration Platform that simplifies the composition, deployment, modification and debugging of business processes. Unlike solutions patched together with several point-products, Tifosi is a distributed, peer-to-peer platform with a layered architecture comprising:

- o Tifosi Peer Servers
- o Tifosi Enterprise Server
- o JMS Messaging Server
- o Management Tools
- o Adapters

ISAPI filter for Microsoft ISA Server Microsoft Consulting Services, India

We had developed the ISAPI Filter for Microsoft ISA server, to enable authentication using RSA SecurID

The idea is to put Infosys' Intranet Domain forest behind the ISA Server firewall, and the access to these Intranets are to be granted based on the authentication using the RSA SecurID. Since both

Microsoft ISA Server and RSA don't have an interface for working together, we implemented an ISAPI filter for the ISA Server, which would intercept any request for connection to the network, and will allow access only after authenticating the user using the RSA SecurID.

Project Copernicus Credit Suisse Private Bank, Singapore

CT was engaged by Intiqua Singapore to provide a code review of Project Copernicus to establish the state of the system with respect to unknown or perceived risks, evaluate specific architectural qualities, assess the quality of code and highlight areas for improvement in terms of maintainability, scalability, and adherence to standards.

The Application has been developed with Globus as the Backend, Siebel for Relationship Management, Seal for Authentication and BroadVision Finance for Financial Information. BroadVision interacts with Globus, Siebel and Seal through TIBCO's Message Bus.

Record Management National Crime Research Bureau, New Delhi

NCRB is a premier institution for collection, collation and publication of data relating to crime in India.

NCRB wanted to put in place a system that would allow access to and the sharing of hundreds of thousands of crime records created over decades, which existed in databases of police districts across the country.

The developed system allows efficient sharing of information and facilitates greater coordination at a national level.

Intranet Site for Project Management Microsoft Corporation, India

We have developed an Intranet Site for Project management in Microsoft. This site is intended to be a single point interface for all the Consultants, Enterprise Services Managers (ESM) and Directors to get status of various projects.

The website based runs on Sharepoint Portal Server (SPS) with the following features:

- o Feature to add/edit/delete a project.
- o Various documents like project plan, SRS, Legal documents etc are automatically created for a new project.
- o Metadata about the project is saved.
- o Reports generated based on user's inputs and metadata.
- o Versioning control inbuilt in Folders to maintain different versions of the documents

- o Various revenue reports based on region, consultants, customers, partners, and category can be generated.

Vehicle Tracking System

Maruti Udyog Limited, India

Convergent Technologies is developing a Vehicle Tracking System for Maruti Udyog Limited, India that keeps track of each vehicle on each sub station of the assembly line. It also helps Maruti in making available the raw materials and other peripherals before the vehicles arrival on a sub station.

Dynamic Data Labeling System

Delta Security Technologies, US

Convergent Technologies is developing a Dynamic Data Labeling System for Delta Security Technologies, US to provide Mandatory Access Control (MAC) to send and receive sensitive emails by numerous users based on their access rights.

Taxi Metering and Dispatch System

Transportopia, US

Transportopia's system wants to emulate a Taxicab Metering and Dispatching System, which combines Global Positioning System (GPS) technology, Wireless data transmission, the Internet and other technologies in order to provide customers with access to their fleets.

Customers should be able to access the information by logging in to the Transportopia Web Site using a PC connected to the Internet. Cab Companies should be able to access all the information about their fleet using a web browser. Regular customers should also be able to use the Web to call cabs and make reservations.

Graphical Resource Editor (GRE)

Hubert-Ebner gmbh, Austria

This is an SDI application for displaying a hierarchical structure within a resource file and add/remove resources from the file. The program maintains a human readable text script file containing information on how to build resource file for automated rebuilding later. Functionality for storing the resources lies within a Win32 DLL. This was implemented using Windows NT, MS VC++ and Microsoft Foundation Classes.

Automated Graphics Generator

Australian Tourist Commission, Hong Kong

The Automated Graphic Generator enables ATC's Marketing personnel to build high-resolution ready-to-print quality Ads by picking the corresponding template and defining values for different the attributes of the template - headline, subhead, price, place of origin etc. The Visual Interface allows the creative agency to define VB templates by defining placeholders, their positions, type (text, graphic, size etc.). Marketing personnel can build highly customized and language specific Ads in different file formats - TIFF, BMP, JPG - and send as Mail for verification or give them for high-resolution printing.

This is implemented using Windows NT, VB 5.0, MS-Access and ActiveX controls.

Web-enabled Open Systems

Be it developing services using cutting edge Application Servers like BroadVision One-to-One, Vignette StoryServer, Microsoft SiteServer and IBM NetCommerce Pro, we have experience in building Virtual Communities, integrate shopping carts with Net-to- Phone payment handling systems, implement discussion forums, 3D chats and Content Management Systems amongst other possibilities. We also have comprehensive experience to engineer 3D shopping malls and Webcasting Projects.

Dealer Management System (DMS) Samsung Electronics, India

We have developed the Intranet-Extranet for Samsung, which acts as a single point interface for Samsung's Distributors, Dealers, SRPL (Marketing Agency), CPM (Country Product Mgr) and NMM (National Marketing Manager) to exchange marketing & sales info on a need-to-know basis. Information regarding the sales, POP/POS, Schemes etc. is available for various user groups with different preferences.

The various modules of this Application are:

- o SEIIT- Countrywide Dealer Management System
- o NETGAINS- Dealer Loyalty Program
- o INTERTRADE- Customer Loyalty Program
- o OEMPO- Purchase Order Tracking

The DMS has been implemented using Microsoft technologies and is integrated with SAP, Talisma and Microsoft Commerce Server. In the next phase, it would be implemented on the Microsoft .NET framework.

Online Shopping and Customer Loyalty Program Swire Properties, Hong Kong

It's a **BroadVision** based online shopping mall, where over 400 retailers from the 6 real-world shopping malls of Swire sell their products. Users can reserve products and then go to the mall to pick up the products. The entire order processing and fulfillment cycle has been automated.

There are three major modules: **User Interface** for the visitors to browse through the site and place their orders, **Merchant Interface** for merchants to publish their products and fulfill the orders placed by the site visitors, **Admin Interface** for the administrator to manage and migrate products from the **staging** server to the **deployment** server.

Environment:

BV Enterprise 5.5, BV Retail Commerce and Publishing Center for Application Development; Sun Solaris 2.5 as OS; JSP and C++ as languages; and Oracle 8i as the Database.

We have also designed and developed the backend components on top of the BroadVision One-to-One platform using Rogue Wave Libraries and C++ Objects.

Fiorano Marketplace (FMP) Fiorano Inc, USA

Fiorano MarketPlace (FMP) is a flexible eBusiness Infrastructure Platform designed to meet the requirements for creating powerful B2B marketplaces, with features like:

Create and manage online catalogs Open APIs built on Java2 standards for extensibility RFQs, Bid/Ask, Real-time Auctions and Order Management, Sophisticated demand aggregation capabilities Real-time collaborations Wireless marketplace access Business intelligence for market indices, market segmentation and decision support data

Web-based Customer Services and Billing (bsnlgurgaon.com)

Bharat Sanchar Nigam Limited, Gurgaon, India

The BSNL Gurgaon web-based system offers to its customers an Information Portal about customer-centric services like Waiting List; Status of services asked for; Customer Service Center Locators; regular updates on Services offered, Commercial, Billing and Tariffs by BSNL; and most importantly, it offers its customers the facility to find out the status of their outstanding monthly telephone bills through the internet.

BSNLGurgaon.com main site and the Administrative Interface have been created using Microsoft Technologies and SQL, and the site is integrated with the existing Billing System at BSNL, Gurgaon.

National Train Enquiry System (trainenquiry.com)

Centre for Railways Information System, India

The objective of the web application called **WebNTES** is to make online enquiry of trains possible. A user can inquire for all the trains through Internet.

Various inquiries possible are:

- o Arrival/Departure of trains
- o Trains between important stations
- o Schedule time table of trains
- o Running time table of trains

This application now runs on Microsoft **.Net** framework using SQL Server as the RDBMS.

Sales and Distribution Module India Markets, India

India Markets' client is a tyre manufacturer for trucks, passenger cars and buses and it operates in 2 market segments, viz., replacement market segment and OEM vendor segment.

In order to improve the efficiency of its "Sales and Distribution" function of this tyre manufacturer, Convergent Technologies is building a Web-based application to handle its C&F Operations, Sales Force Automation, Demand Forecasting, Logistics and Material Allocation and Sales Intermediaries Management systems.

Competence Management Program Ericsson, India

The People & Culture Department at Ericsson recognises that the real assets of Ericsson are its employees. Keeping them in mind, Ericsson provides various employee-focussed services and modules through the Ericsson Corporate Intranet.

Convergent Technologies has developed the Competence Management System (CMS) that is aimed at Employee Motivation, Entertainment, Knowledge Sharing and Performance Management, as a part of the Ericsson India Intranet initiative.

Wireless and Telecommunication

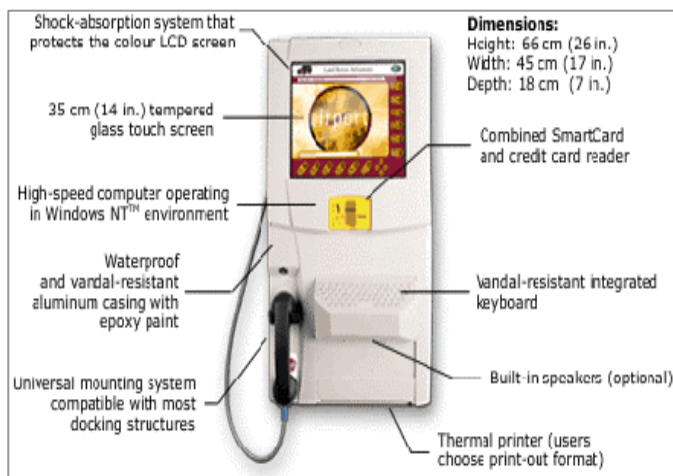
We have the ability to build cross-media and cross-devices systems and applications like Multimedia Pay Phones, enable Net-to-Phone and Phone-to-Net transactions, Content Publishing and Management Systems, CTI-based Interactive Voice Response Systems (IVRS) and other interesting applications. We have the expertise to integrate EDI, Message Handling, Value-added Network and Managed Network Services.

Interactive Voice Response System JP enterprises, india

We are using the Development Suite from Dialogic - CT Media - to build and deploy an Interactive Voice Response (IVR) System based Telephonic Quiz Program, which would have hundreds of users simultaneously dialing into the public telephone network and interacting with the IVR System. The entire conversation cycle is fully automated and is interfaced with the database, report generation module and automated triggers.

CT Media acts as a "super service provider" to applications written to standard programming interfaces. In contrast to the limited interoperability offered by the traditional model of connecting multiple PC-based systems to a public branch exchange (PBX), CT Media lets all applications function as peers by sharing calls and resources. This IVRS can be customized for any game show on Television, Radio or Telephone (Public or Mobile).

Multimedia Pay Phone (M2P2) Absolu, Canada



This MultiMedia Pay Phone can be used for Telephony, Web browsing and multimedia functionalities like recording a telephone conversation and mixing.

We had designed and developed the firmware part of a communication module between the Media Board and the Single Board Computer operating on Windows NT 3.51. We were also involved in the design and development of firmware on the Media Board for handling data between ISDN card and the telephone handset/CODEC, firmware module for communication between an FPGA and the Zytrax ISDN Card, module for handling the voice data between the ISDN card and telephone hand set, state machine for handling data between the Single Board computer, telephone hand set and the ISDN card for recording the telephone conversation or playing a wav file from the web, module for recording the telephone

conversation in MS-Windows WAV format, test suite to test the individual functionality of the media board, and maintenance of the Application Handler, a communication module between the front end and the back end device driver on Windows NT 3.51.

Location-Based Services Tele.Ring, Austria



"Content Applications" were developed for tele.ring, a subsidy of Mannesmann, Germany (Client: Blue-C). They access contents from various Content Providers in Austria and make location-based services like weather, traffic, cinema and stock available on WAP-enabled Mobile Phones, Alcatel Screen Phones and WWW.

Content Applications were developed on the platform called HomeTop Solutions (HTS) provided by Alcatel.

These contents can be of any standard format using xml or email etc. A separate module was developed to parse the content in flat file format. And the second part of the backend is the Content presentation. This is responsible for presenting the content in different media. The core business logic was coded into Java Beans whereas the presentation logic was coded in JSPs. This enables the use of same Backend irrespective of different Media and different content type. The Software Development Kit from Unwired Planet (Phone.com) was used to develop and test the content presentation on WAP.

New Media and Video Broadcasting

We offer a unique approach to automate and prepare broadcast facilities for moving and managing media. Whether it is streaming live video over the web or Video-on-Demand, we have the ability to make the power of video to build a vast spectrum of end user capabilities.

Event Webcasting on buildurpc.com Samsung Electronics, India

We have prepared the facilities for simulcasting of video on the web for leading TV channels like STAR News.

Backend processes and applications are built to perform content acquisition, management and migration of the content from the staging and QA system to the production system. Content Mgmt. Interfaces were designed on top of the existing editorial system.

The same experience has been used for webcasting of some of the corporate events at Samsung Electronics, India (buildurpc.com).

This is done on Windows NT Server 4.0 using Visual Basic 6.0, ASP, SQL Server 7.0, IIS 4.0, Windows Media Technologies, and ADO/OLE-DB.

3D Entertainment Park Metronet GmbH, Germany

This Virtual Reality based 3D Entertainment Park was created as a proof-of-technology application for Metronet where the user can walk freely in 3D space and do shopping the way he would do in real life.

The BroadVision libraries were extended to generate dynamic content in VRML form apart from dynamic HTML pages. The 3D world modeling was done using VRML and the dynamic behaviour and real time content updating was done using Java Applets that talked to BV objects.

This was implemented using C++, BroadVision One-to-One 3.0, VRML, Java, Oracle 7.3.2 and Solaris 5.5.1.

Template Management System Star News, India

This Template-based Automated Graphic System was developed to generate broadcast quality graphics on-the-fly for live events like Indian Parliament and Assembly Elections, live Game/Quiz shows like 'Who Wants to be a Millionaire' etc.

The system allows a creative engineer to define RTX templates by abstracting objects - Text, Graphics, Video etc - from a composite graphic.

At run-time, the operator chooses the right graphic template and clicks on the button on the Visual Interface. This interface obtains data from the database and uses RTX controls to run the template and render Broadcast quality graphics on Television. Inscribe's Digimix Suite controls the Video & Graphics Frame Buffer to perform the video effects.

The software can be customized to drives the buzzers, stage lights, viewer's dialpad etc. Polling Devices communicates to the PC through the serial port.

This is implemented using Windows NT, VB 5.0, RTX, Inscribe's Digimix Suite and MS Access

Media Anywhere Taalee, Athens

We had developed a system to search the World Wide Web and collect information of all the media files/links available all over the WWW, and then categorize them as per the WorldView. We developed an Intelligent Knowledge Module for filling in the missing attributes of the WorldView. MediaSite helps in both logical and physical segmentation of the clips and has a strong indexing engine built into it.

This was done on Windows NT using JDK 1.2.

3-D Gaming Digital Motion Pictures, Austria

We worked on a 3D Game Development (Kill With Love) with VIRTTOOLS as the gaming platform engine. We used 3DS Max and Maya for the project.

The interactive part is programmed using the "Virttools" APIs and simplified C as the scripting languages.