



CIM Concepts Incorporated

CIMserv Solution

Process Data Services Architecture



CIM Concepts Incorporated

Company Profile

Headquartered in the greater Philadelphia metropolitan area for over eighteen years, CIM Concepts has provided innovative integration and infrastructure support services. These services encompass process and business data integration, application development and support, database design and administration, information technology consulting, computer infrastructure support and project management. The CIM Concepts expertise includes both real time and transactional information systems.

CIM Concepts works with clients in a partnership approach integrating clients' diverse systems to enhance business efficiency and profitability. Since the company is a small business, CIM Concepts has the ability to quickly respond to clients with flexible, personalized service. The company prides itself on providing professional and dependable service; client needs come first. CIM Concepts has garnered an impressive record of successes with companies by working creatively to provide solutions that meet their unique needs. CIM Concepts technical team evaluates the client's overall goals and works with clients to incorporate, as appropriate, new and existing/legacy systems, so integration is cost-effective and non-disruptive to business and plant operations.

The staff of engineers and technology professionals at CIM Concepts stay current with the latest technologies allowing CIM Concepts to provide a high level of technical expertise to its clients. Business partnering relationships exist with some of the leading technology companies in the industry, including Microsoft, Sun Microsystems and Oracle Corporation.



CIM Concepts provides cost-effective services to help save both time and money, letting you focus on running your business.



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Solution Overview

Process manufacturing companies are challenged to improve their operations and at the same time reduce their operational expenses. Furthermore, they need to accomplish this with a leaner workforce. The demand for rapid response to an ever-changing environment is legendary. It is therefore critical to incorporate the right tools, technology and services to assist with addressing these challenges.

CIM Concepts addresses these challenges of process manufacturing by providing a flexible, modular tool set that allows for the integration of plant information on the shop floor level, as well as between the shop floor level and the enterprise (business) systems. Using real time data helps manufacturers have the ability to make faster, better decisions to improve operations and lower costs.

Process data exists in various process systems at plants. The ability to present the data as useful information, enabling it to move across plant and corporate networks to a desktop environment, and allowing local desktop users to access the information using de facto off-the-shelf packages (for instance, Excel) is desirable. CIM Concepts provides solutions to address these requirements.

CIMserv addresses the requirements of plant level information systems by:

- Automation of data collection
 - from PLCs, DCS or other systems
 - saving time and reducing risks of clerical errors
- Integration of legacy and existing system's "islands of information"
 - allowing plant personnel to focus on analysis of information rather than on the gathering of data
- Enabling multiple specialized systems to communicate with each other
 - including interfacing plant process data with other applications such as LIMS, QC, Safety, etc.
- Incorporating actual real-time manufacturing data for analysis
 - taking advantage of real time data to optimize processes
 - enabling faster, better decisions

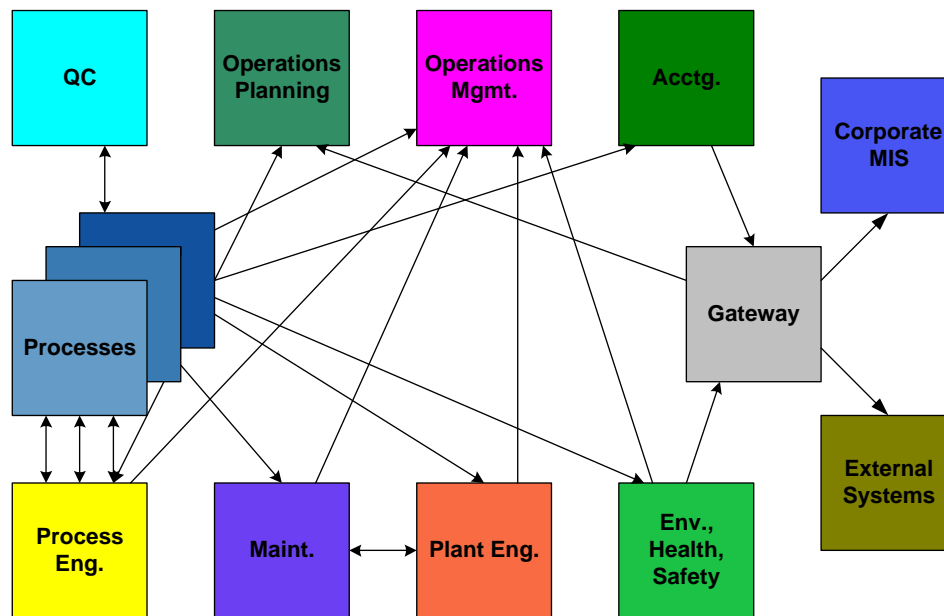
CIMserv is a set of highly configurable tools designed to provide real-time and historical/statistical process data sharing and management in manufacturing and process industries environment. The CIMserv modular architecture offers a flexible, scalable solution that provides for vendor independence. Data is distributed in formats compatible with a variety of applications.



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Integrated Plant Information Framework

As plant systems need to communicate with each other, specific interfaces were created. Changing one of the systems required rewriting all the multiple custom interfaces to various other systems. Bottlenecks, increased network traffic, and inaccurate and inconsistent data obstruct plant operations. Islands of automation are created. As plant needs and requirements evolve this can become an unwieldy and arduous challenge.



The end result of creating custom interfaces between plant processes and systems can be a disjointed trail of data that is difficult and expensive to maintain, and even worse to change. Information is not easily usable in a convenient format, data is not always timely, and some data is needs to be re-keyed and risks clerical error. The scenario hinders the goal of operational efficiency and reducing costs. The CIMserv framework is designed to alleviate the problems caused by developing specific, custom interfaces between the various plant processes and systems.

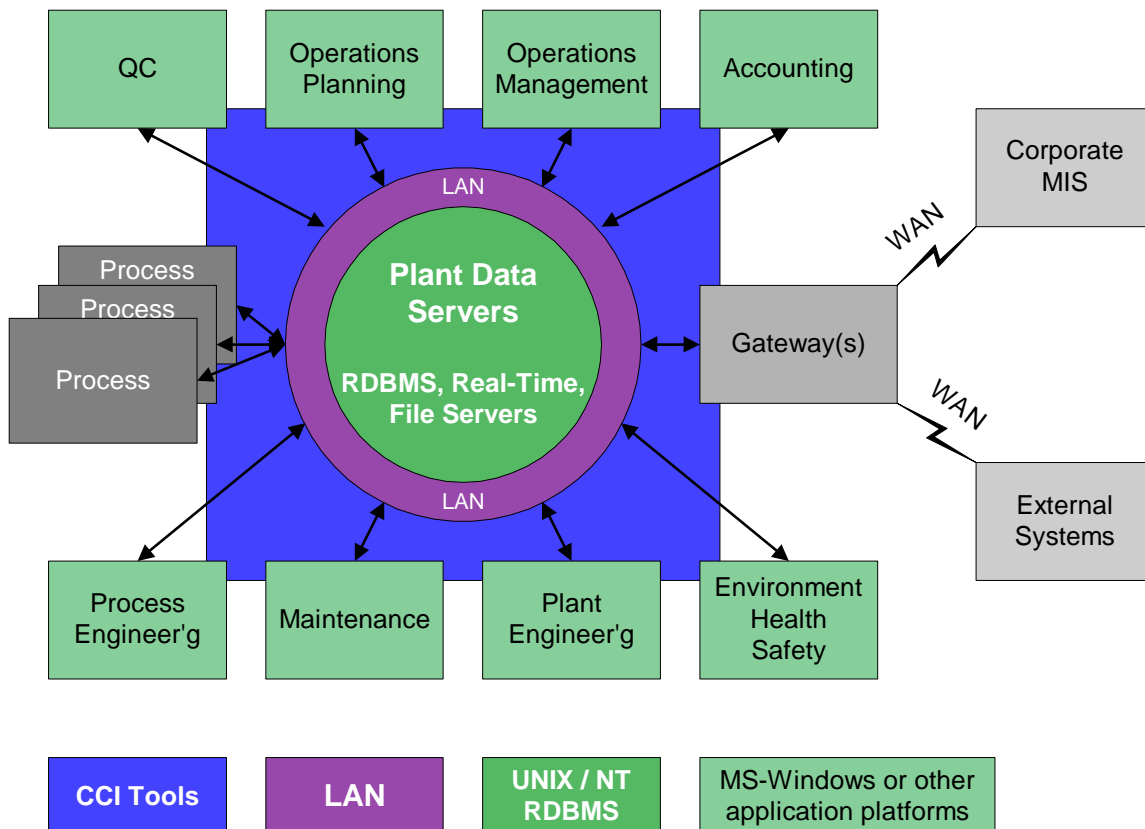


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Integrated Plant Information Framework Continued

By utilizing the CIMserv framework, systems require only one interface to the plant data server. The plant data server is then responsible for sharing the information with other systems, as required. Changing any system means adapting one interface to the plant data server. This represents a huge savings of time and money, as well as a reduction in risk.

CIMserv facilitates an integrated plant information framework. It uses information gathering, processing and storage components matched to the individual plant requirements. This approach encompasses newer standards together with existing and legacy systems. Because the approach is a modular design, it is a very cost-effective solution. Companies only acquire what they require.





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Integrated Plant Information Framework Continued

The CIMserv software architecture features:

- An adaptable solution for plant-wide environments using servers and browser based thin clients, implemented in a network protocol-independent manner.
- A scalable solution ideal for both small or pilot plants, as well as multi-unit/multi-site process plants, allowing for change and growth.
- A flexible open system design for building and integrating best-of-breed solutions, enabling vendor-independence at all levels (front-end, server, database, network, and client applications).
- A suite of modular subsystems configured to specific plant requirements.

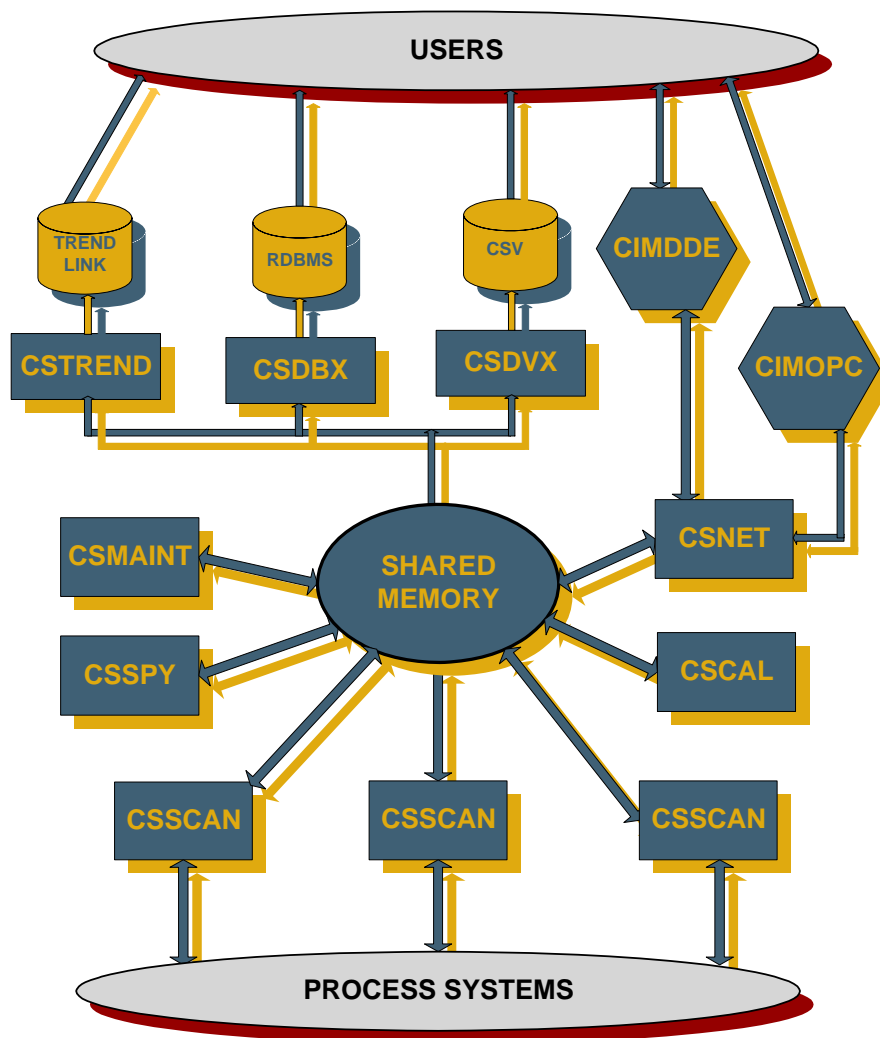
The benefits of CIM Concepts' CIMserv framework are that the plant level information system's speed of sharing data is increased and effectiveness is improved. The methodology and solutions are modular and extremely cost effective.



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CIMserv Architecture Diagram

The value of CIMserv is that it incorporates the best of custom developed applications and that of packaged solutions. Custom applications typically provide a specified manner of addressing unique plant requirements. Packaged solutions can cut development time and related costs and risks, but often cannot be adapted to meet the flexibility required for specific needs. Using CIMserv, a tailored solution is crafted using a modular tool set so that companies can take advantage of the best of both worlds.





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CIMserv Architecture Diagram Continued

Using this architecture, as plant controllers, automated equipment or devices change or evolve over time, they are easy to integrate into the CIMserv solution. This allows the plant the flexibility of acquiring best of breed equipment while not being constrained by their existing specific architecture.

CIMserv Solution Component Description

CIM Concepts' CIMserv product suite is a set of modular software tools designed for plant information integration; CIMserv bridges the gap between process data and information that users need. The components are categorized into server components (which are the unglamorous but necessary utilities and modules that “work behind the scenes” and make things happen), and user components (which are the tools that enable data analysis).

Major Server Components:

CIMserv	Modular Real-Time and Historical Data Integration Server Tool Kit
CIMsys	Server System Administration Utility to help with system management and automation, including scheduling and monitoring functions
CIMdbx	Relational Database Automation Tool Kit for database export and data generation (load real-time data into relational databases including Oracle, Informix, SQL Server, PostgreSQL, Access, etc.)
CIMscan	Interfaces to a variety of real-time environment (such as PLCs, DCS systems, etc.)
CIMopc	OPC DA2 Compliant Data Server for Real-time and Static Data

Key User Components:

CIMweb	Web-browser front-end for multiple CIMserv Servers
CIMdde	Windows DDE Data Server to provide real data feeds to a DDE enabled Windows Application (i.e., Excel, Word)
CIMtrendX	Real-time Trend Viewer for Continuous and Batch Processes



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Benefits of CIMserv Solution

By implementing a CIMserv solution, clients can leverage their investments. These are a few of the benefits of a CIMserv Solution:

- Proven reliable solution – join an expanding list of clients who use CIMserv to integrate their plant information
- Shorter implementation time – by utilizing a toolset, there is no need to develop from scratch; CIM Concepts' team can get you where you need to be quickly and reliably
- Cost effective – with CIMserv flexibility you pay for what you need, get what you pay for, and optimize the resources you already have; high tech can be very expensive to implement, maintain, and support
- Minimized risk – risk from not being done on time and over budget; CIM Concepts excellent reputation provides you with the added stability you need when embarking on mission critical projects
- Knowledgeable experienced team – CIM Concepts team has a process industry background and understands the needs and issues; packaged solutions still require the use of systems integrators to customize; CIM Concepts expertise helps in multiple scenarios (custom developed, flexible tool kit, or other packaged solution), and can provide necessary integration and infrastructure support for your success

The CIMserv solution provides clients with the tools they need to improve plant efficiency and profitability.



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Professional Services

Beyond the tools and technology, CIM Concepts provides the expertise to help clients operate more successfully. Partnering with clients allows CIM Concepts to provide flexible and personalized services. CIM Concepts can integrate and support a client's diverse real-time and business systems requirements. The goal is for a coherent information infrastructure and improved plant efficiency and profitability. CIM Concepts employs industry standard software engineering principles to maximize project investments. By utilizing standard methodologies, CIM Concepts helps clients to succeed and maintain their projects. A CIM Concepts' Project Manager is an integral part of the project team to ensure that the project remains on track meeting client objectives.

In addition to CIMserv implementation and integration services, CIM Concepts has the expertise to provide a variety of information technology services and support. Some of the services CIM Concepts provides include:

Feasibility Studies	Application Development and Support
Functional Specifications	Database Design and Administration
System Architecture and Design	Vendor Evaluation & Coordination
Process and Business Data Integration	Support for Systems and Applications, including 24 x 7 coverage
Project Management	Network Architecture, Implementation and Troubleshooting

CIM Concepts has experience in the following technology areas:

Hardware Integration	Networks
Multiple Languages/Applications (C, C++, Visual Basic, Java, Perl, SQL, XML, CGI, etc.)	Multiple Relational Databases (including Oracle, SQL Server, Informix, Access, etc.)
DCS, PLC, and Data Logger Interfaces	Multiple Operating Systems (UNIX, Linux, Windows 2000, NT, XP, etc.)

Working as part of the team, CIM Concepts can provide professional services, all or in part, in order to make projects successful. The objective of CIM Concepts services to create high value for our clients and help them to quickly reap benefits of their efforts. CIM Concepts can help clients get strategic information and integration services at a price they can afford.



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Why CIM Concepts?

- Expertise** CIM Concepts staff of highly trained professionals has the experience to help clients be successful. The CIM Concepts team is comprised of individuals with real-world experience who have been in the client's situation, faced tough challenges—and succeeded! With a client's vision and CIM Concepts know how, CIM Concepts can make it happen!
- Integrity** CIM Concepts is proud of its reputation as a partner who can be counted on to do what they say they will do—on time and on budget. CIM Concepts is known to be frank in their assessments. With every engagement, CIM Concepts believes their reputation is on the line. That's one reason CIM Concepts has a loyal client base with repeat engagements.
- Support** Unique client needs and requirements are handled with flexible, personalized services. This is fundamental to CIM Concepts business principles. CIM Concepts anticipates client needs and is prepared to go the extra mile to satisfy their clients.
- Value** Quality work at a reasonable price brings value to CIM Concepts' clients.



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