Connecting Customers to Legacy Systems for Web-based Self Service

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***Abstract*--Cinergy has been implementing information technology (IT) systems and applications enabling a digital utility environment the last few years. This panel presentation discusses the implementation of e-Business applications to enable customer self-service by integrating engineering and operation applications and processes with front and back office systems. This implementation represents another milestone as Cinergy continues to e-transform its enterprise for the digital economy, to enhance customer services while increasing its operational efficiencies.**

***Index Terms*--Customer Service, Information System, Strategic Planning**

I. Introduction

Cinergy's progress toward a digital utility vision started with the successful Energy Delivery System Integration Project (EDSIP) that integrated core system technologies and applications such as Geospatial Information Systems (GIS)s, Integrated Work Design and Work Management, and Distribution Management Systems (DMS)s to drastically improve energy delivery engineering and operations [1], [2]. The result is an integrated suite of technologies and business processes for Energy Delivery Resource Planning (EDRP). The panel discussion focuses on the extension of EDRP to enhance customer services, particularly to enable customer self-service through web-based applications.

The implementation of a digital utility at Cinergy consists of three major components (Fig. 1):

- The *Energy Portal* creates the entry point with a new Cinergy.com home page.
- Customer Management and Customer Information Systems *(EDRP* and *CMS/CIS*) form the backbone that integrates engineering and operation functions and provides customer data respectively.
- *EBusiness Applications* transform computer data into information that customers can use and allow customer interaction with back office systems.

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II. eBusiness Applications

The e-Business Application Project of a digital utility program covers four application areas:

- Blended media customer communication — Extends the call center to support customer interactions and communications in blended media and through web-based applications.
- Self applications — Provides self-service capability to the customer, for accessing and changing account information, for example.
- Energy reliability information tools — Improves the communication of outage and reliability information with customers.
- Developer empowerment — Facilitates the transactions between developers and contractors and the utility.

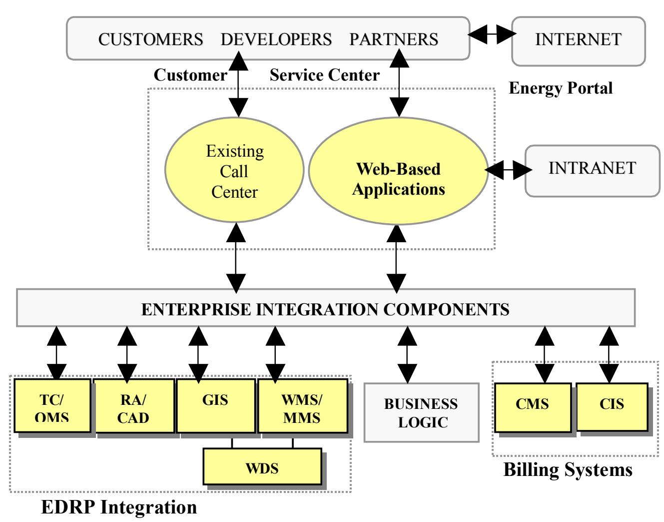

Fig. 1. Conceptual System Architecture of e-Business Applications.

III. Implementation Plan

Cinergy adopted the Rational Unified Process (RUP) methodology for the implementation of these e-Business applications. The applications are implemented in three generations: Generation I completed in the spring of 2001, Generation II completed this summer, and Generation III will be complete in the fall of this year. Following are the

0-7803-7285-9/01/$17.00 (C) 2001 IEEE

planned functions for each generation.

Note that for better manageability, Information Technology (IT) implementations at Cinergy often involve rollouts in two phases: one for the East, which represents the Ohio and Kentucky service areas, and one for the West, which represents the Indiana service area.

A. Blended Media Customer Communication

1): Generation I

- Blended media communications for the East, including Web portal, FAQ and email
- Elaboration of e-billing strategy and program

2): Generation II

- Blended media communications for the West, including Web portal and email

3): Generation III

- Increased blended media options for both East and West, including online chat, voice-over Internet Protocol (IP) contact and co-browsing
- A new e-billing program for East and West

B. Self Applications

1): Generation I

Functionality to allow the customer to:

- Create secure Web account and administer password
- Change account information including mailing address
- Enter meter reading
- Enroll in equalized payment program
- Email appointment request and confirmation

2): Generation II

- Implementation and deployment of simple self-application for turn on and turn offs for the East
- Evaluation of self-scheduling for engineering services

3): Generation III

- Implementation and deployment of simple self-application for turn on and turn offs for the West
- Evaluation of field service scheduling for the West
- Deployment of the East capabilities in the West

C. Energy Reliability Information Tools

1): Generation I

- Outbound Interactive Voice Response (IVR) to communicate outage status to customers in the West

2): Generation II

- Adaptation of Web applications already available in the West for the East
- Energy reliability and power quality reporting for both the East and the West
- Web applications for reporting outages, flickering lights, pole down problems, etc., for the East and the West

3): Generation III

- Graphical interface for Web outage applications for selected customer groups
- Inbound and outbound IVR for outage reporting and outage status feedback for the East

D. Developer Empowerment

All functions are planned for Generation II, including:

- Viewing of new service work orders for both the East and the West
- Submission of new construction by email

IV. Cost-Benefit

The cost of the project is estimated to be about 22 million U.S. dollars, including about \$9 million for third-party services, \$6.5 million for hardware and software, and about \$6.5 million for Cinergy internal services.

The benefits are mainly strategic in nature, including:

- Additional channels for targeted marketing
- An integrated platform for additional revenue opportunities
- Improved customer service
- Generation of momentum and positioning Cinergy for eBusiness
- Enhancing the investment profile of Cinergy

V. Keys to Our Success

The critical success factors of the e-Business application project are:

Meet the "need for speed" — Time to market is a key factor in realizing the business benefits of IT projects in today's competitive marketplace.

- Develop a fast prototype.
- Build multiple iterations.
- Rely on integrated cross-functional teams.

Don't mess with my CIS — e-Business initiatives must not cause interruptions to the ongoing business and the critical IT systems that support it, including the CIS.

- Don't modify legacy systems.
- Use efficient middleware solutions.
- Reduce demands on constrained resources.

VI. References

[1] Dan Williams, "I.T. Initiatives and Implementation for Managing Energy Delivery Systems in Times of Rapid Change," panel presentation, IEEE T&D Conference, April 1999.

[2] Don Murray and Larry Bennett, "Improving Electric Trouble Response by Integrating Energy Delivery Enterprise IT," DistribuTECH, Miami, February 2000.