Bechtel's decision to adopt web-based project collaboration and pitfalls to avoid in proper implementation

Woolsey McKernon, Director Business Development & Marketing

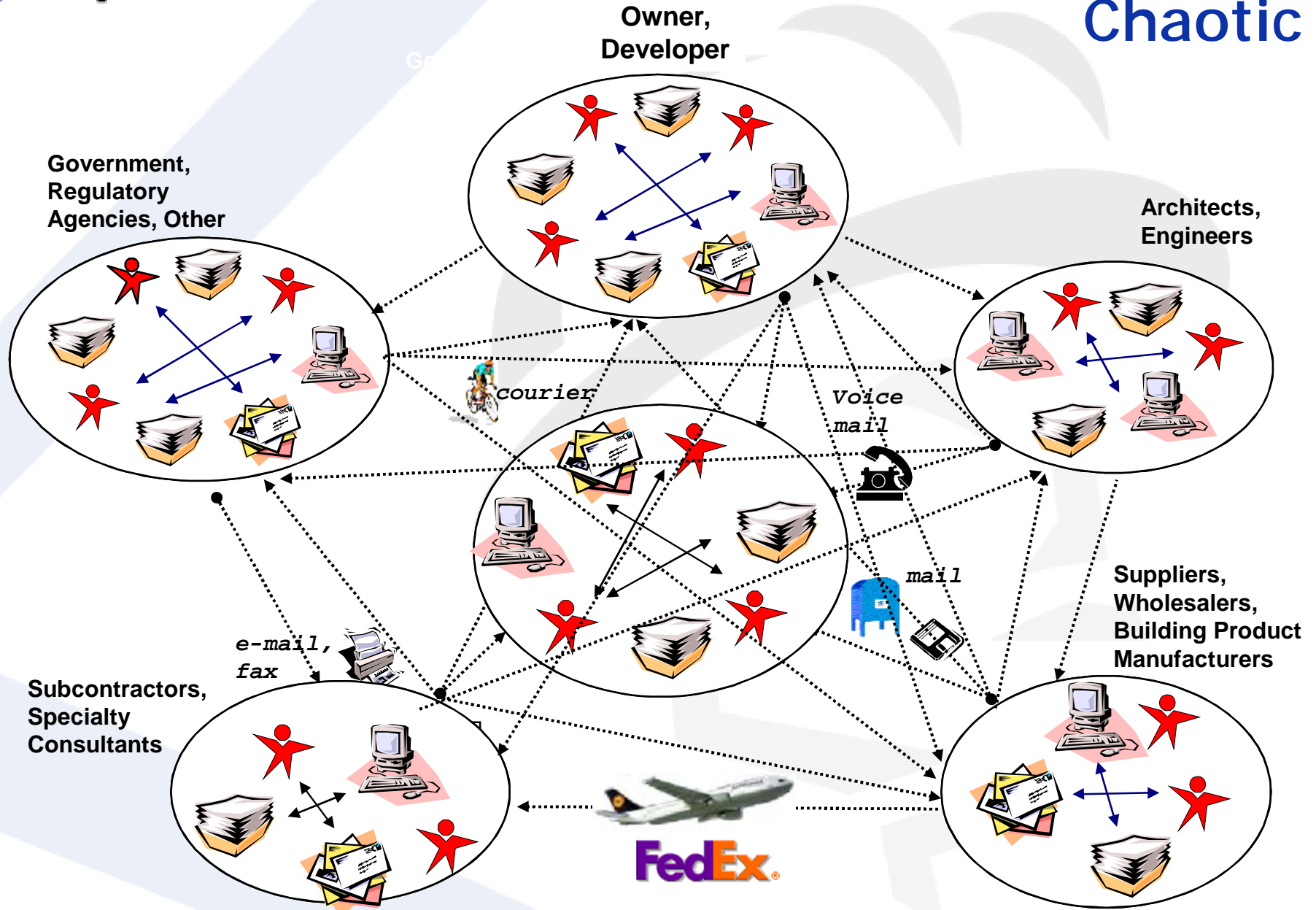*April 26, 2000*

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1. Cephren Overview

2. Bechtel's decision to go to the web

3. Portland Light Rail – the guinea pig

4. Lofty goals

5. Functionality enhancements

6. Lessons Learned

- History
  - Founded in January 2000 through the merger of:
    - Blueline Online, Inc.(the premier project collaboration service founded in January 1997) and,
    - eBricks.Com, Inc.(the leading construction supplies network founded in May 1999)

- Investment
  - $60+M in Venture, Strategic and Private Equity investment.

- Products and Services
  - **ProjectNet®,** Cephren's award-winning project collaboration and project management service
  - **PrintNet™**, Cephren's online reprographics and print services marketplace
  - **MarketNet™** Cephren's fast-growing, online marketplace for buyers and sellers of construction products and services
  - *Catalog Purchasing & Auction Services* will be rolled out over the next 12 months
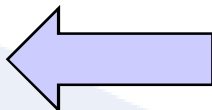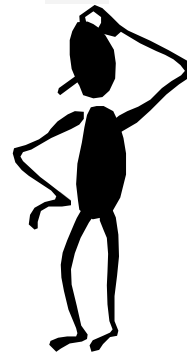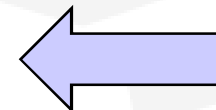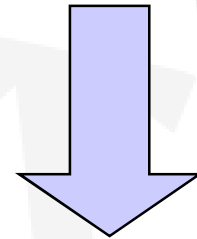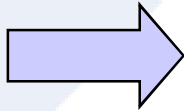
ProjectNet®, Cephren's award-winning project collaboration and project management service

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Why did Bechtel go to the web?

The Construction Industry – Chaotic

Cephren

Owner, Developer

Government, Regulatory Agencies, Other

Architects, Engineers

courier

Voice mail

mail

Suppliers, Wholesalers, Building Product Manufacturers

e-mail, fax

Subcontractors, Specialty Consultants

FedEx

Off-Line Project Flow – RFI's

A client's *Information Management Plan*

MISSION

"Information management shall allow the timely sharing of the most current information between all project participants. The technology used will promote information exchange on a real-time basis, while providing the necessary safeguards to ensure information accessibility is appropriately controlled."

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"The Bechtel Group regards the advent of the Internet to be a fundamental change transforming how the engineering and construction industry does business. Cephren is the leading provider of the most scaleable Internet collaboration and e-commerce framework for our industry and has assisted Bechtel in taking significant steps to leverage the Internet in delivering quality services to our global customers."

-Riley Bechtel, Chairman and CEO at **Bechtel Group**
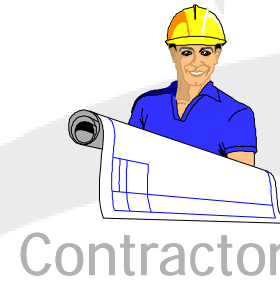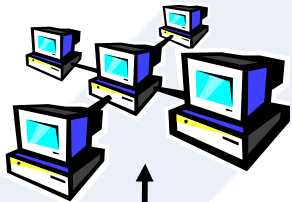
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change the way you build the world

Why PLR?

- A strong Project Manager

- A willing team

- Multiple parties
  - The client – Tri-County Metropolitan Transportation
  - David Evans and Associates
  - STV
  - LTK
  - Siemans and others
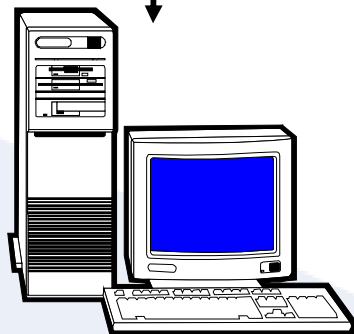
- Major drawing exchange
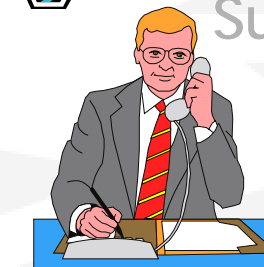
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Bechtel Users

Contractor

Architects

Subcontractor

EPS

- Closed Network
- High Maintenance costs
- Behind on releases

Customer

Cephren

"Document-centric" project management for Bechtel

- Correspondence
- Functional docs
- General Items
- Specifications
- Procurement docs
- Bechtel Drawings
- Eng'y Support Documents

DOCUMENTUM

"Person-centric" project management for the individual

- Email
- Calendar
- Tasks
- Contacts
- Public (Bechtel) folders

Outlook Today

"Project-centric" project management for the entire project team

EDMS as document repository

Synchronize with Outlook

- Universal viewing/markup of documents

- Secure file upload from any application

- Team Directory

- Link to *Outlook* for project calendaring, action item tracking, etc.

- Universal project forms (RFI, etc.)

ProjectNet

Design

- **Front-end to all project documentation** (involve partners securely)

- **Web based viewing, redlining & annotation of drawings**
- **Secure FTP for file sharing**
- **Whiteboard conferencing & drawing review**

Procurement

- **Online bidding, distribution, notification, audit trail, publishing**

Construction

- **Electronic shop drawing distribution and Virtual Plan Room**
- **Shared online Forms (RFI's, Meeting Minutes, Issues), audit trail and logs**

Operations

- **Archive (documents, messages, forms and all associated audit trails) to CD**

What we ended up with...

- FTP drawing submission to Bechtel
- Xref/background file share for consultants
- Posting of Meeting Minutes, Project Photos, Project Directory,etc.
- Erouting of RFI's between
  - Subcontractors
  - Bechtel Engineering
  - Bechtel Construction
  - Consultants

Cephren change the way you build the world
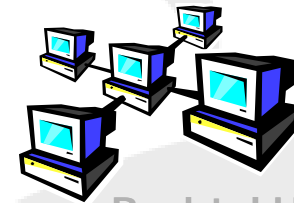
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Functionality enhancements b/c of PLR

- Tighter security levels on folders/documents

- Revision control

- Automatic xref upload

- Schedule drawing uploads

- Easier file upload (integration w/ Windows Explorer)

- Easier creation of Meeting Minutes

- Routing of RFI's

- Viewing of tiff's, max files

Lessons Learned
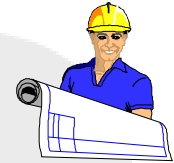
- Need to focus on up-front proper implementation planning with ALL team members

- Proper training of ALL participants

- Use of tool needs to be driven at the highest level

- Dedicated project support = CRM

- Don't "baseline" your first project

- Buy a paper scanner

- Ensure that every team member has Internet access

- Ensure the technology is ready for primetime...

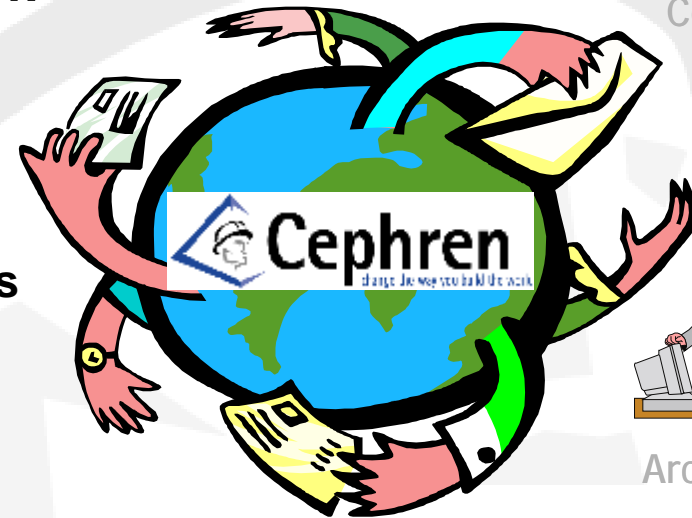- "Web-based" doesn't mean client server, but ASP

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- Application Service Provider (ASP)
  - Focus on their competency (EPC…)

- Internet vs. Proprietary Network
  - Don't pay for network infrastructure you don't need

- Software Updates
  - Monthly feature enhancements
  - Immediate access to new features

- Support
  - 24X7X365

Bechtel Users

Contractor

Architects
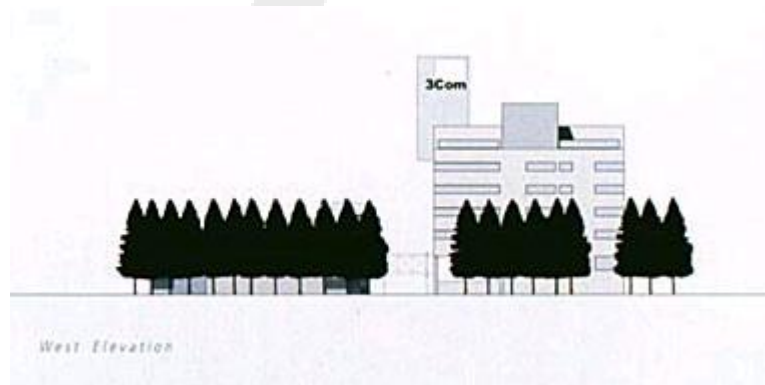
Subcontractor

Customer

ProjectNet Scalability

The Venetian Hotel - $3b

Hotel Serrano - $15m

3Com Corporate Campuses in CA & UK

West Elevation

3Com
More connected

WATG

Wimberly Allison Tong & Goo
Architects, Planners and Consultants

WEBCOR
BUILDERS

Cana Brava - $600m in Brazil

Webvan – 26 sites in US

webvan

BECHTEL

Expansion of largest Copper Mine in world

ODEBRECHT
Commitment to Service

Phelps Dodge Corporation

Phelps Dodge
Mining Company

Marquee Customers

Industry/Media Validation & Awards

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Learn how Cephren benefits you

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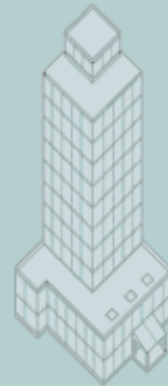Not a Cephren member? Join Now!

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Architects

Engineers

General
Contractors

Specialty
Contractors

Distributors

Manufacturers

Reprographic
Shops

Cephren's online workplace is designed specifically for the construction industry to address your collaboration, project management and procurement needs throughout the design-to-build process.

Whether you're an owner or developer, architect or engineer, general contractor or subcontractor, distributor or manufacturer, Cephren's services enable you to do business smarter, faster and more cost-effectively.

Our service offerings include:

- ProjectNet® Cephren's award winning online project management and collaboration service.
- MarketNet™ Cephren's fast-growing online marketplace for buyers and sellers of construction products and services
- PrintNet™ Cephren's online reprographics and print services marketplace

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Thank you…