Collaborative Knowledge Work:
Theory and Practice of a Successful Commercial Application

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How well do organizations think?

- How long does it take for new people to come up to speed?
- Does knowledge walk out the door when someone leaves?
- How long does it take to find the right person for the task?
- Does the left hand know what the right hand is doing?
- How do organizations communicate and coordinate their activities?
- How do organizations maintain relationships as employees change?
Some Important Ideas

- Knowledge Capture and Reuse
- Corporate Memory
- Organizational Learning
- Virtual Communities
- B2B Collaboration across Value Chains
Some Business Realities

- Rampant workforce turnover
  - need for organizational memory

- Scarcity of talent
  - need to find and leverage experts

- Pressure for fix-fee services
  - need to capture and reuse best practices

- Need for Speed: Outsource and Partner or Die
  - need for B2B knowledge communities
A Success Story for Collaboration and KM

- Intraspect was designed and built for collaborative knowledge management.

- It actually works.
  - People use it.

- It is a commercial success.
  - They pay for it.

- It is bringing new capabilities to mainstream business areas:
  - CRM, BI, PSA, HR, Supply Chain
Some Intraspect Customers

Web & System Integrators
- KPMG
- PROXICOM
- CSC
- Inforte
- Lava Group
- Andersen Consulting
- Concero
- Certive
- Xcelerate
- e-Si
- Verizon
- Siemens
- Storage Networks
- Digital Access

Marketing Services
- WPP Group plc
- H&K
- JWT Specialized Communications
- Kapp Collins
- Brodeur Worldwide
- CommonHealth
- Zentropy
- Epinions.com

Financial Services
- JPMorgan
- Fidelity Investments
- Kemper Funds
- H&R Block
- GM
- Boeing
- BHP
- NASA
- Lawrence Livermore

Telecom
- Verizon

High Tech
- Cadence
- Exar
- QuickArrow
- Exar
- Hewlett Packard
- ABC Technologies
- Outbound Technologies

Other Vertical Markets
- General Motors
- Boeing
- BHP
- NASA
- Lawrence Livermore
- Pepperdine University
- Rice University
- JPL

E-Commerce
- OneMain.com
- Apropos
- Altrum Technologies
- Aladdin Systems

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- IDT
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OK, ENOUGH MARKETING!

WHAT DOES IT DO AND HOW DOES IT WORK?
The Challenge:

How can technology foster organizational intelligence?

How to create an environment where

- people naturally build on each other’s work
- a corporate memory is created and maintained
- virtual communities emerge and thrive
Existing Technical Approaches Don’t Solve the Problem

Portals

Point-to-point Email
The Solution: Memory Mediated Collaboration

- Shared Online Environment
  - Integrate All Information Sources
- Many-On-Many Collaboration
  - Not Just Teams and Rooms
- Community Knowledge Base
  - Build on Previous Work
How It Works: The Intraspect Group Memory

- discover
- contribute
- discuss
- share
- keep informed
- disseminate
- re-use!

Intraspect Group Memory

Email  Files  Web  Notes  Reports
Collaborative Knowledge Work in Professional Services

- Interact with Customers
- Generate Proposals
- Source and Hire
- Ramp New Consultants
- Find Experts
- Collaborate on Engagement
- Track Issues
- Manage Deliverables
- Capture & Distribute Best Practices
Enterprise Deployment on a Federation of Intraspect servers

- Professional Services Applications
- Collaborative Portal Services
- Customer and Partner Extranets

Content Managers -> Management -> Engagement Teams
Outsource Partners -> Customer Teams
Product Functionality

- Collection, Linking, Organization
- Discussion and Commenting
- Document Management & Sharing
- Full-text & Metadata Search
- Universal Subscription
- Distribution over web and email
- Access Control & Security
- Customization and Personalization
Example: Workspaces for Collaborative Engagements

MegaCom: Voice Over IP

We are building a Voice-Over-IP capability for MegaCom.

- **Nature of Work:** IP Telephony
- **Partner in Charge:** Neal Mostradanus
- **Team:** MegaCom Voice Over IP Engagement Team

View in Web Folder
- Best Practices Used
- Deliverables
- Engagement Review
- Statement of Work
- Customer Correspondence
- Extranet Team Discussion
- Internal Discussion

Appears in 1 context:
- Intraspect Group Memory
- Professional Services
Information is always In Context
Contribute directly to workspace from e-mail, browser or desktop

Quickly find email addresses with LDAP integration

Unique customized e-mail address

Full text search of attachments
Contribute directly from Microsoft Office 2000 or Windows Desktop

WebDAV allows Intraspect presentation as web folders.
Personalized information management space

- Personal workspaces and client accounts
- Navigation Bar
- User-controlled command bar
- Links to news and items of interest
- Urgent Notifications
- Tasks, events, etc.
Search and you will find.
Find important client information

- Adds a project workspace with just one click
- Review project history
- Templates to sort and analyze across accounts
- Links to live reports in other systems

Example features:
- Advanced Systems, Inc
- Palo Alto based wireless content integrator
- Industry: High Tech
- Region: USA-SW
- Status: Customer-Referencable
- Web Address: www.adsys.com
- Stock ticker: var
- Delivery Executive(s): Paris Austin
- CD Executive: Alan Alda
- Adays Competitive Analysis
- Adays Project Area in Peoplesoft/Vantive System
- ICAD Documentation: 05-Oct-2003 at 21:44 PDT (Date User)
Subscribe to stay informed of relevant activity

Notified on his Personal Page

Notified by email
Subscribe and be kept informed.
Apply best practices to create a new project workspace

Select project members; assign access policies

Apply existing methodology

Replicate vital project statistics w/ c-spaces
Structured project spaces to run and manage the engagement

Quick project overview with searchable metadata

Use pre-formatted methodologies or create new ones

Project member security policies.
Custom Searches combine metadata and full-text query
The Ontology of Context and Collaboration

- Context hierarchy with typed nodes
  - allow multiple parents, no inheritance

- Conversational relations
  - next-in-thread/in-reply-to
  - context-sensitive annotation

- Implicit metadata
  - contributor, date, content type

- Explicit metadata
  - titles and descriptions
  - user-defined types and attributes
How it works: the principles

- Design for organizational intelligence.
- Create a knowledge ecology.
- Motivate by enlightened self-interest.
- Support existing work practice.
- Collaboration is king.
1. People are part of the killer app!

What People do well

- Create lots of things to remember
- Make sense of data and information
- Communicate to solve problems
- What they are motivated to do

What Machines do well

- Remember lots of things
- Search large bodies of data and information
- Deliver messages to large audiences
- What they are told to do
2. An Ecology of Knowledge Reuse

- Capture knowledge at its source
  - get it while it’s hot!

- Capture knowledge in context
  - don’t dump and try to sort it later

- Grow the corporate memory as a product of people working on-line
  - corporate memory emerges
3. Enlightened self-interest

- Make it easier to re-use than to reinvent.
- Make it easier to work together, on-line.
- Global benefit emerges from local action.
  and…
- The more people use it, the more valuable it is to everyone!
Not a Field of Dreams

“If you build it, they will come.”

“If they use it, it will build itself.”
4. Support existing work practice

- Reach out to existing toolsets
  - email, web, desktop

- Support existing business processes
  - workflow and metadata for routine tasks

- Don’t turn knowledge workers into librarians!
  - don’t expect IT staff to do it, either.
5. Collaboration is King!

- Knowledge management is driven by collaborative work.
  - the source of knowledge creation
  - the context for knowledge reuse
  - the main reason to be working over the net

- KM without participation will fail.

- Collaboration in knowledge-based communities is the way we work in the new economy.