Using Information Technology to Transform Unstructured, Creative Work:

An Industry Perspective

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Design is Inherently Fun

It is:
• Creative
• Challenging
• Fast-Paced
• Dynamic
• Collaborative
• Consuming
• Chaotic

It has:
• Rhythm
• Tempo
• Crescendos
• Purpose

It often requires:
• A leap of faith

Star-Birth Clouds
It Becomes Not-Fun When

- There are interruptions to the natural rhythms and flow
- It gets mired in the details
- It loses focus
- Too much attention to process is required
- Critical knowledge is unattainable
- Team doubts its ability
Systems to Support Knowledge Work

- Eliminate work vs. Creating more work
- Provide something the team otherwise wouldn’t have
  - Knowledge
  - Capability
- Don’t impose an alien discipline
- Maintain the fun

*First: Do no harm*

Artist’s rendering of NASA’s Mars 2003 Rover
Two Examples

• **Technical Questions Database**
  – “partner system”
  – Situated interaction

• **Design Knowledge Capture**
  – “servant system”
  – Fly-on-the-Wall operation
Knowledge System Requirements

Earth - full disk view of Africa

Robustly Invisible Humbly Omniscient

The Danger Zone
Desired Research Results

• How to inspire self-discipline
Desired Research Results (cont’d.)

• How to leverage natural structure of corporate intranet to create fast/efficient search-browse-find capability
• Establishing and managing layered access to information
• Methods for capturing and leveraging contradictory information
Desired Research Results (cont’d)

- How to identify information that is truly relevant and timely and of interest
- Greater understanding of privacy vs. accessibility for mining issue
- Legal and ethical implications of “sh/could have known” knowledge
Most images may be accessed via:
http://photojournal.jpl.nasa.gov/

The New Solar System