The DHS HSI Community of Practice (CoP) and Portal Development Effort

HFE/HSI Management and Applications SubTAG (TAG 64)
26 October 2010

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Agenda

- Introduction and Requirements
- Phase III SBIR Transition
- Proposed Features and Initial Mock-ups
Introduction

- **Community of Practice (COP)**
  - Process of social learning between people with common interests who collaborate to share ideas, find solutions, and innovate

- **Development**
  - Provide value; relevant content, organized schema.
  - Move users from passive consumers into active participants.

- **DHS COP requirement**
  - Web portal used by members of the Human Factors/Behavioral Sciences practice area within DHS
  - Geared toward solving problems
  - Encourage participation, create connections, generate ideas, and produce meaningful products through collaboration
### Initial DHS Requirements

<table>
<thead>
<tr>
<th>Business Needs</th>
<th>Functional Needs</th>
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| 1. Support the development of a DHS Human Systems Integration Community of Practice (CoP) | 1. Establish a web-based CoP that is accessible to users in the federal government, private sector, and other organizations  
2. Establish appropriate role-based access and privileges for users |
| 2. Store and share content for CoP members | 1. Enable online storing, viewing, and modifying of user-generated content for multiple types of user |
| 3. Support internal and external communication and collaboration among CoP members | 1. Use calendars to track meetings, conference calls, and other scheduled events  
2. Enable information exchange on projects through blogs, wikis, and/or message boards  
3. Create and respond to user surveys  
4. Send messages/alerts to individual users based on user preferences |
Expected DHS COP User Base

**Level 1**
- DHS organizations
  - CIS
  - CBP
  - Counter Narcotics Enforcement
  - DNDO
  - FEMA
  - FLETC
  - ICE
  - Intel and Analysis
  - National Protection and Programs
  - TSA
  - USCG
  - USSS
- DHS laboratories
  - Environmental Measurements
  - Plum Island Animal Disease Center
  - Transportation Security

**Level 2**
- DHS direct contract support (i.e. SETA)
- Department of Energy laboratories
  - Argonne
  - Brookhaven
  - Idaho
  - Lawrence Livermore
  - Los Alamos
  - Oak Ridge
  - Pacific Northwest
  - Sandia
- DHS Centers of Excellence
- DoD Organizations
- DoT Organizations
- NTSB
- NIST

**Level 3**
- International Partners and Foreign Government Counterparts
- Industry partners and performers
- Limited access and selected content only

N ≈ 75
N ≈ 100
N ≈ 100
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Phase III SBIR Transition

- The Resource for Applied Cognitive and System Engineering (TRACE-SE) – AFRL/RHC Funded SBIR
- Develop a process and toolset to embed the application of the emerging practices and technologies of cognitive systems into the traditional practice of systems engineering.
TRACE-SE Drivers

- **Lack of awareness**
  - Know **what** cognitive engineering is and how it can help?

- **Lack of knowledge**
  - Know **how** to do it, **when** to do it, or **what methods to use**?
  - **Understand the value** (and budget) of cognitive engineering?

- **Lack of process**
  - Know **where cognitive engineering fits in** system design process?

- **Lack of communication**
  - Know **how to translate cognitive engineering findings** into a format that systems engineers can understand and use?
TRACE-SE Solutions

- Build operationally relevant system design aid
  - “One button” approach to structure the system design
    - Guide users through existing systems engineering processes
  - Bring traditional and cognitive systems engineers together to design systems
    - Allow them to identify positive opportunities to influence the system development process

- Create a community of practice for both systems and cognitive engineers to share information
  - Learn from each other’s experiences

Focus of Phase III Transition
Method Finder for Best Practices (TRACE-SE Concept)
Agenda

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Initial Development Tasking

- **Year 1 Tasking (start July 2010)**
  - Requirements Definition
    - User needs assessment
    - System Security Plan
  - Content Development
    - DHS materials
    - Industry standards
  - Software Development
    - Wordpress and plug-ins
  - Quality Assurance

- **Year 2 Tasking**
  - User Testing and Evaluation
  - Updated Requirements Document
  - Additional Software Development
  - Quality Assurance
Core Features

- User Accounts
- User Login
- User Profile
- Who’s Online
- Chat
- Email Notifications
- Calendars
- Discussion Threads/Forums
- Blogging
- Document posting/linking/check-in : check-out
- COP Admin (FAQ, POC…)

APTIMA
HUMAN-CENTERED
ENGINEERING
Future Features

- **Problem Solving area**
  - Ability to link a number of resources together to help solve a particular problem

- **Digital White board/Online mind mapping**
  - Collaborative brainstorming and sketching

- **Training**
  - Incorporation of multimedia and other computer-based training applications

- **COP member survey tool**
  - Rapid data collection capabilities

- **Interactive Group Affinity Diagram**
  - Electronic version of a sticky note organizational system
- TRACE-SE serves as a starting point
  - Extensive redesign effort
- Based on DHS S&T Requirements Documents
  - Incorporates key features
  - Vetted against design realities
- Derived from initial abstraction hierarchy
  - Specify the “why” and “how” of the core functions
- Future end-state
  - Blends core and future features
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HSI Engineering

- Programs
- Activities
- Processes & Practices
- Data

Human Performance Research

- Projects
- Drivers & Agendas
- Overviews
- DHS HP Model

Participate in the Community

Get Answers
- Discussion Forums
- Problem Solving Center
- Whos knows What

Find Documents
- Standards
- Best Practices
- Policies & Procedures

Collaborate
- Mindmaps
- Affinity Diagrams
- Whiteboarding

Contribute
- Blogs
- Surveys
- Feedback

Human Factors News

Author: John Doe
Date: 10-01-2010


Active Discussions

Software to Support U.S. Navy’s Distributed, Multi-simulator Training
jodriscoll

Advice on choosing a UI Evaluation Technique
mpaley

Currently Online: (10 Members, 3 Guests)
Mike Paley, Joseph O'Driscoll, Yale Marc, Dave Bauer, Jason Sidman, David Cade, John Doe, Gilbert Mizrahi, Daniel Serafi, Marilena Dugan.

Read More

Date: Monday, October 04, 2010
Welcome to the DHS Discussion Portal!

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Community of Practice

Community of Practice Forum Section 1

Community of Practice Forum Section 2

Community of Practice Forum Section 3
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Community of Practice Forum Section 4
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Statistics

Threads: 5
Posts: 7

Last Post

Software to Support U.S. Navy's... by: mpley
09/29/2010, 02:45 PM

Advice on chosing a UI Evaluatio... by: jodriscoll
10/03/2010, 05:45 PM

What's Currently Going On?

Currently Active Users
There are currently 13 users online. 10 members and 1 guest(s).

Mike Paley, Joseph O'Driscoll, Yale Marc, Dave Bauer, Jason Sidman, David Cade, John Doe, Gilbert Mizrahi, Daniel Serafty, Mariena Dugan.
News Article Title


Sub Article Title
Tellus dolor, dapibus nean auctor wisi et urna. Aliquam erat volutpat. Duis ac turpis. Integer rutrum ante eulac us. or wisiquam erat volutpat. Duis ac turpis.
Sem. Duis ultricies pharetra magna. Done.

Sub Article Title 2
read more