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Usability analysis within The DataONE network of collaborators.

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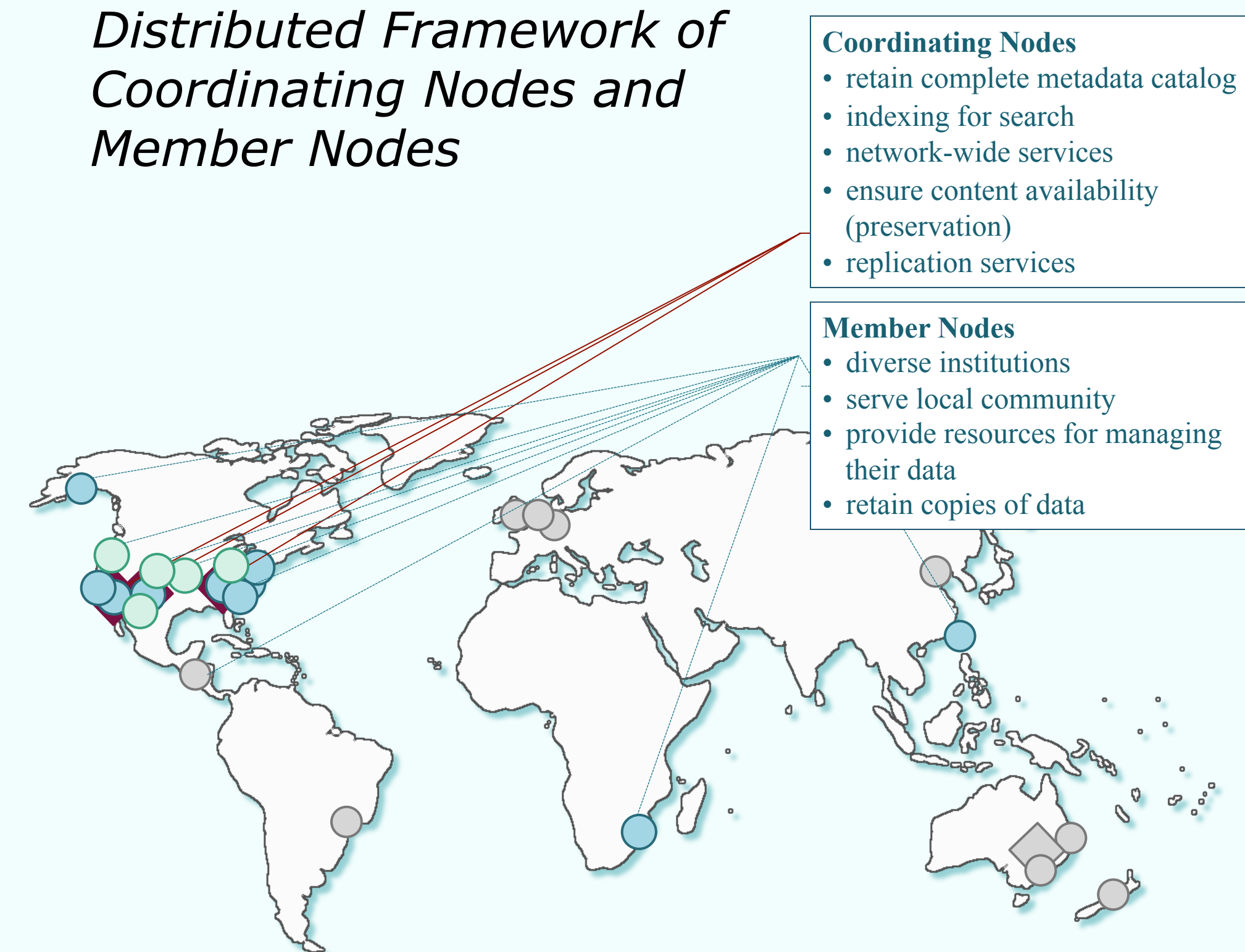
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Usability Analysis Within the DataONE Network of Collaborators

What is DataONE?

Cyberinfrastructure enterprise
(tools, ideas, people)

Distributed Framework of
Coordinating Nodes and
Member Nodes

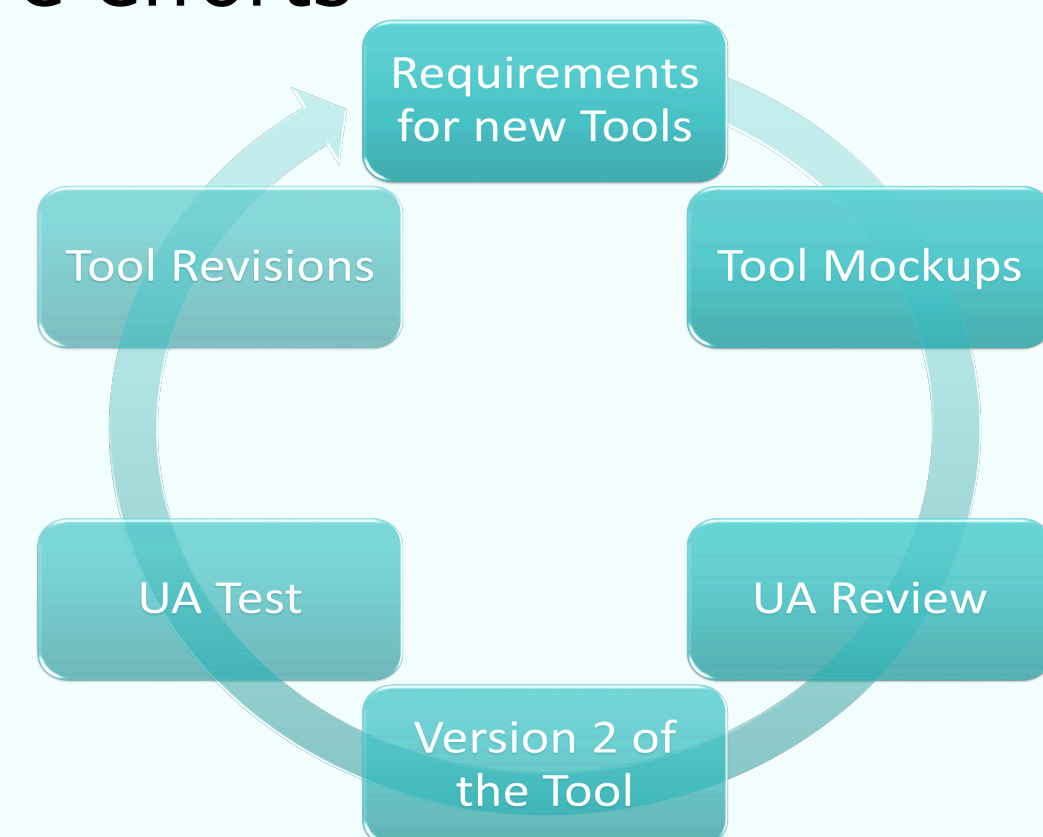


Member Nodes

- Diversity tolerant (less tightly coordinated)
- Freedom to try or build new tools, methods and leapfrog forward

Coordinating Nodes

- Tightly coordinated, stable service platform
- CI based on cases prioritized for functionality
- Support and adapt existing community software efforts

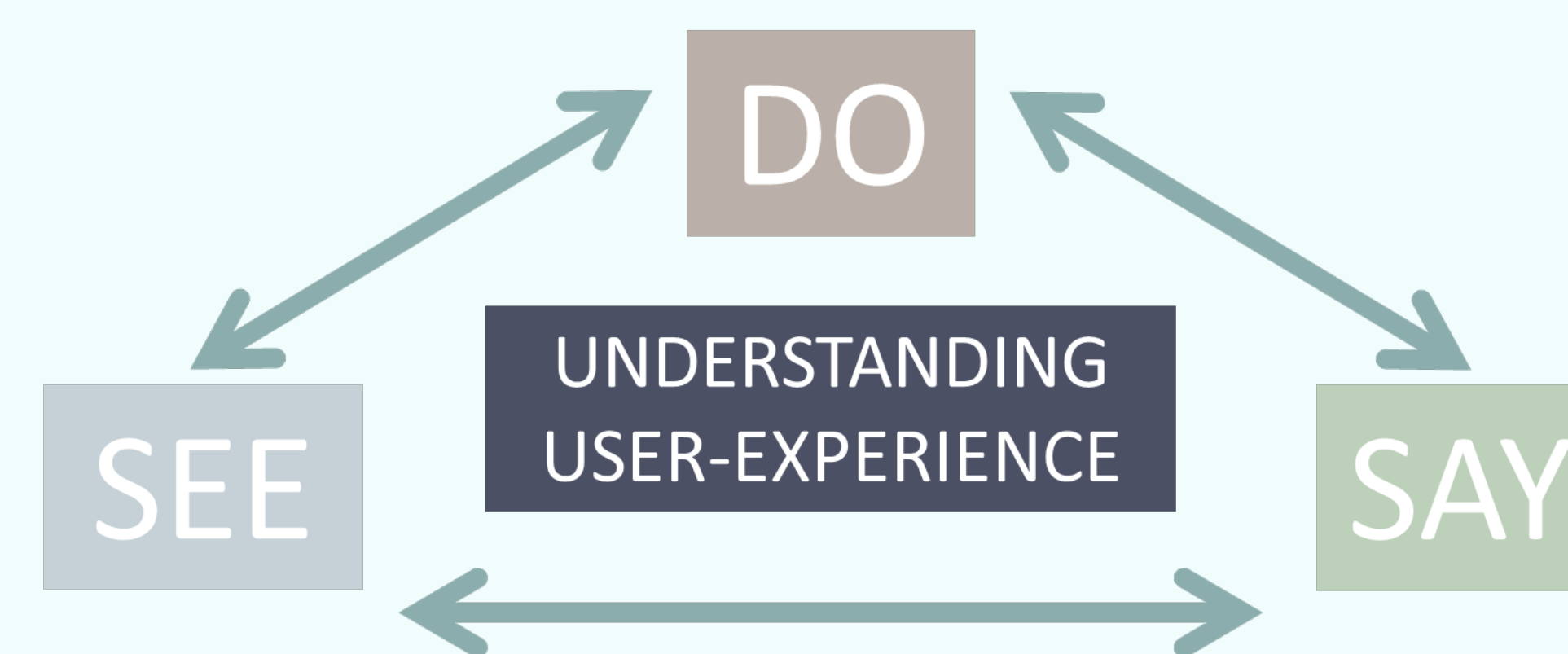


Provide support for the entire data life cycle - preparation of data sets, stewardship, tools to access and use the data

- Collection/preparation
- Deposition/acquisition/ingest
- Curation and metadata management
- Protection, including privacy
- Discovery, access, use and dissemination
- Interoperability
- Exploration, visualization and analysis

What is User-Experience Testing?

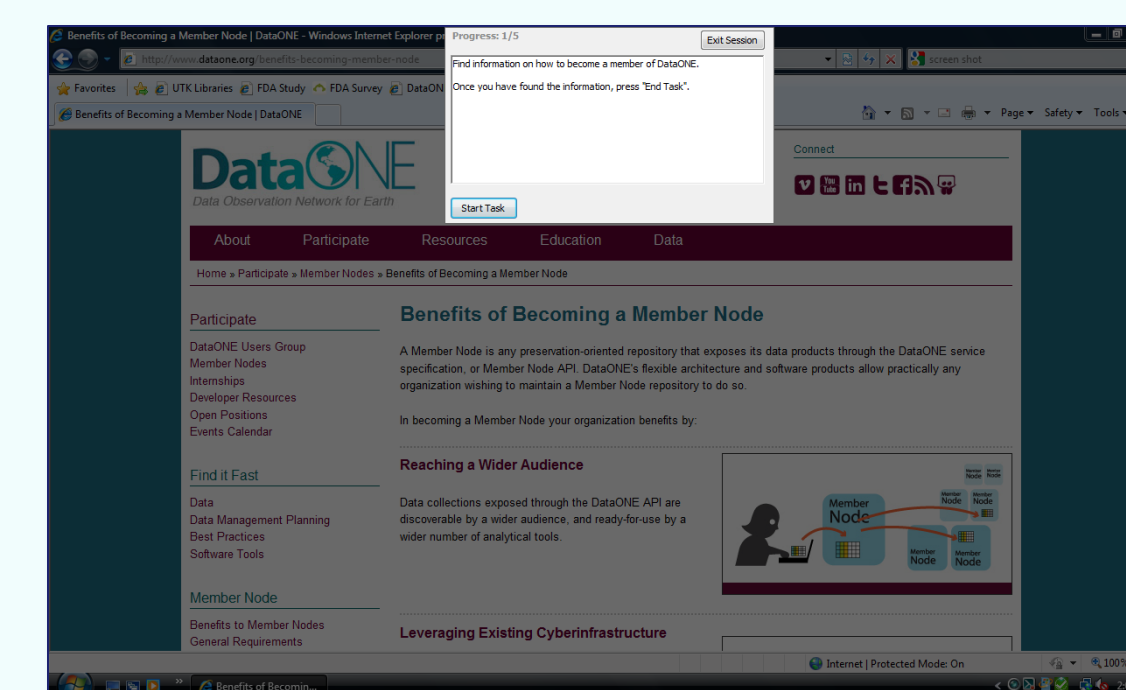
User-experience testing assesses the quality and ease of a user's experience when interacting with a product or system



In a user-experience test the researcher observes users as they perform a variety of tasks.

The testing provides insight into problems the user encounters. Common measures include:

- Time on task
- Number of keystrokes or mouse clicks
- Error frequency
- Think-Aloud
- Pre and Post Questionnaires

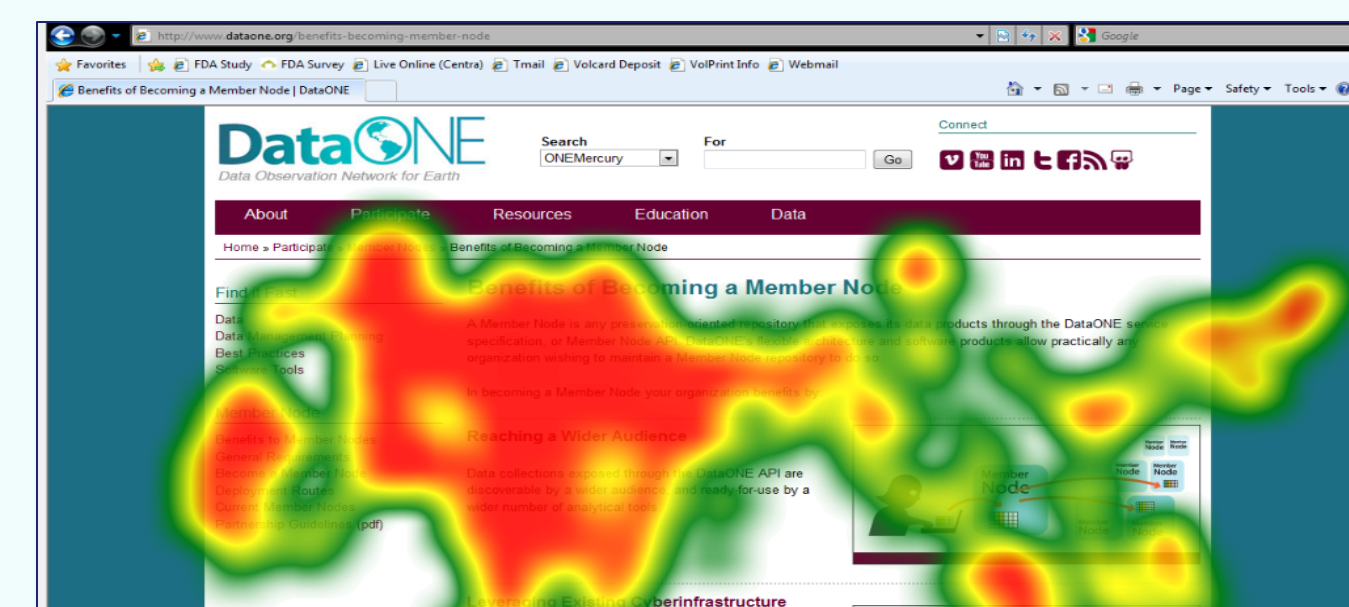


User-Experience testing looks not only at their ability to navigate and find information, but how satisfied they were with the process.

- Did they find the product easy to use?
- Were they frustrated? Why?
- How confident were they using the product?
- How likely are they to use the product again?

What is Eye-Tracking?

Eye-Tracking measures where the user is looking (fixation points) and the movement of the eye (gaze path). Eye-tracking provides valuable information to evaluate the effectiveness and efficiency of a product or system.



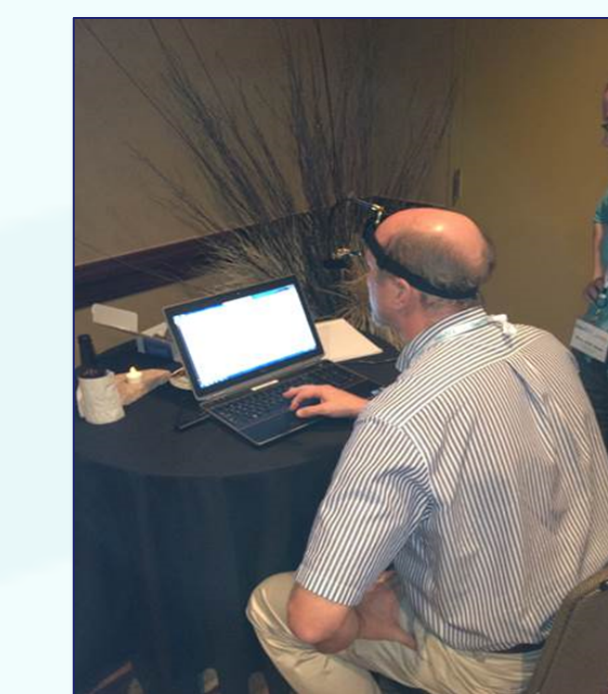
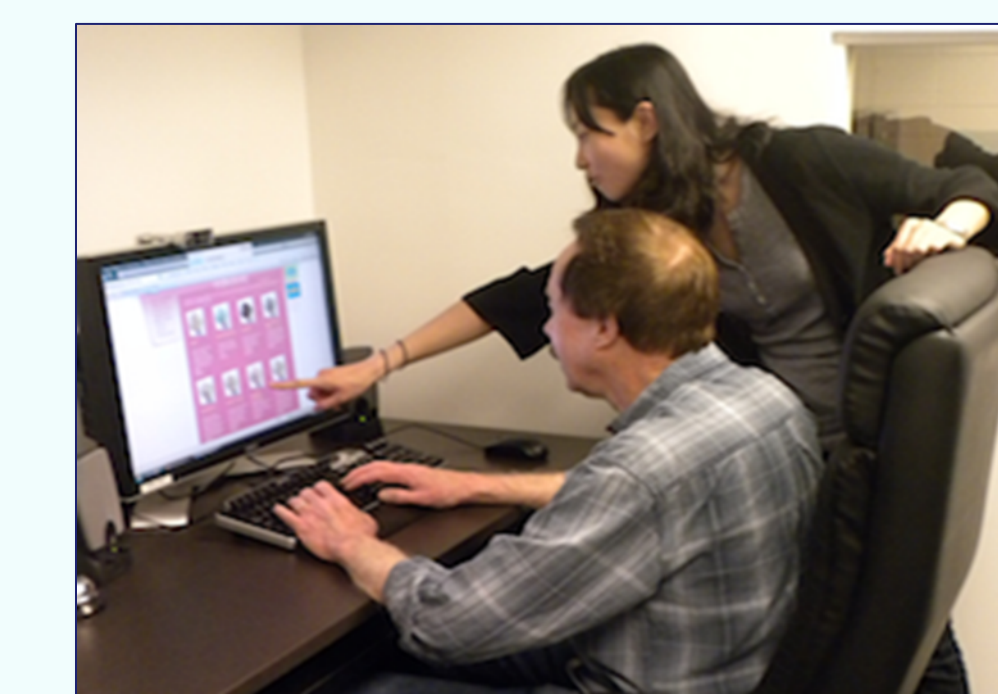
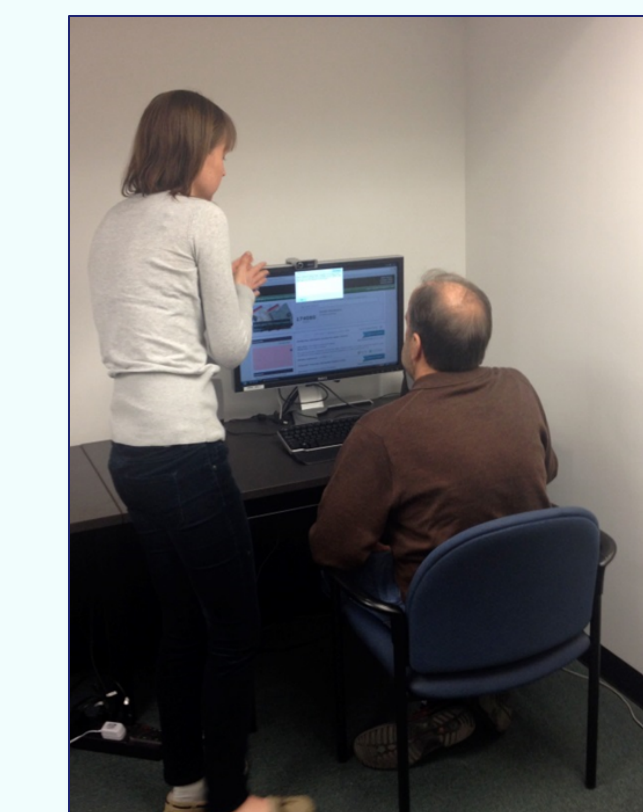
- Eye-Tracking measures:
- What attracts the users' attention
 - How long users focus on each area
 - What areas of the page attract the most attention
 - How users read/view the information



- This helps you:
- Detect usability issues
 - Design an optimal page layout
 - Study how users interact with information
 - Study users' search strategies or decision-making processes

User-Experience Lab Capabilities:

- Eye-tracking
- User Research
- Heuristic Evaluation
- Focus Groups analysis
- Galvanic Skin Response
- Portable Usability Testing
- Remote Usability Testing
- Mobile Usability Testing
- Usability Training



Benefits of user-experience testing:

- Study what users do (not just what they say they do)
- Understand user behaviors, needs, and motivations
- Create an efficient, useful, and accessible product
- Create a pleasing user interface
- Provide a good return on investment
- Compare different product designs



Bibliography

- www.usability.gov
- Holmquist, K., et al. Eye Tracking: A Comprehensive Guide to Methods and Measures. 2011.
- Krug, Steve. Don't Make Me Think: A Common Sense Approach to Web Usability. 2005.
- Kuniavsky, M. Observing the user experience: A practitioner's guide to user research, 2003.

For more information please visit:
<http://cics.cci.utk.edu/user-experience-lab>

Acknowledgements

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