

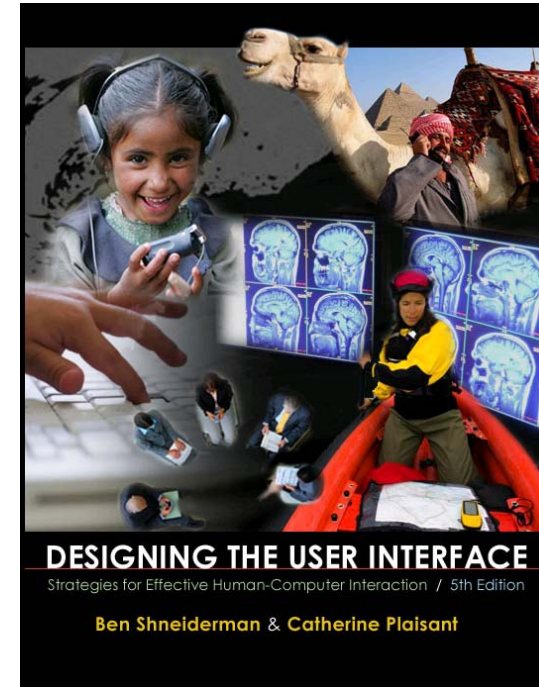
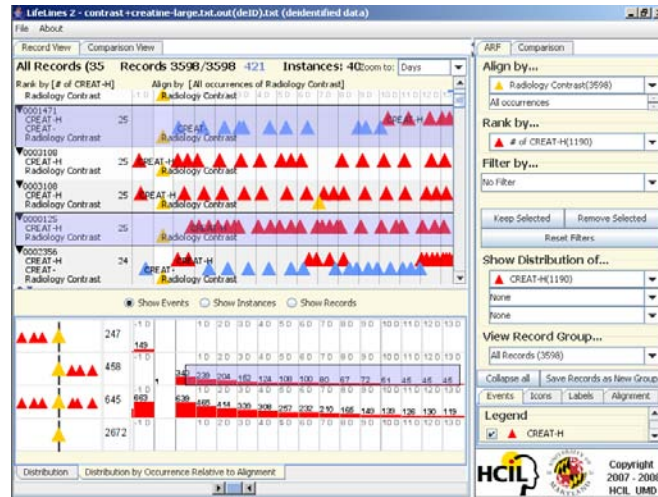
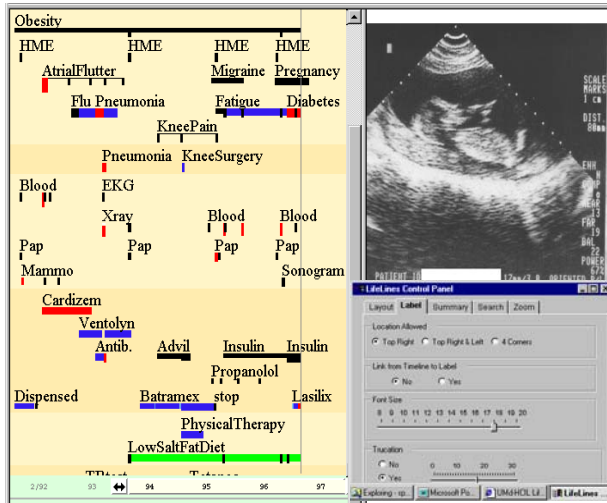
# **Evidence-based Usability Guidelines for Promoting Safety and Efficacy**

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Professor, Department of Computer Science  
Member, Institute for Advanced Computer Studies  
Member, National Academy of Engineering



# UMd HCIL's work for NIH & ONC



## Strategic Health IT Advanced Research Projects

- Security of Health Information Technology
- ***Patient-Centered Cognitive Support***
- Healthcare & Network Platform Architectures
- Secondary Use of EHR Data

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# Usability Guidelines are Powerful

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**Apple, Microsoft, Android, ...**

**NASA, FAA, DoD, ...**

**HFES, WWW-Consortium, ...**

## **RAISE QUALITY**

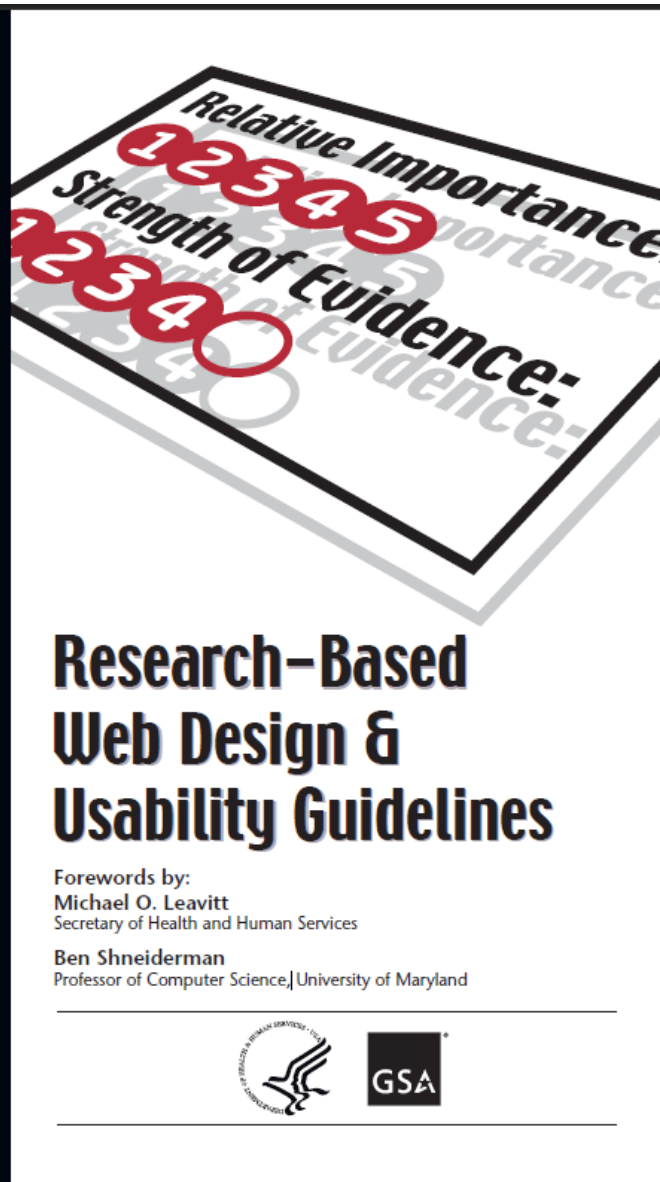
**Promote Consistency → User Performance**

**Speed Development → Programmer Productivity**

**Reduce Errors → Organization Reputation**



# Usability Guidelines are Powerful



**Education**  
**Enforcement**  
**Exemption**  
**Enhancement**

- 209 Guidelines
- 400+ References

[Usability.gov](http://Usability.gov)



# Improving Usability of EHRs



- Publish EHR guidelines documents
- Permit examination & discussion of products
- Report on usability study results

# Improving Usability of EHRs

- Publish EHR guidelines documents
- Permit examination & discussion of products
- Report on usability study results
- Promote consistency with industry-led common user interface guidelines
- Report failures periodically with common metrics
- Work with Government agencies to coordinate specific industry practices



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