TURF: A tool to Semi-Automate Usability Assessments of EHRs

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Introduction

Expert review is a usability assessment method that is recommended by the NIST Usability Evaluation Protocol[1]

Expert reviews are quick and cost effective. However, they occur in multiple stages and are labour intensive.

The TURF software tool builds off the TURF framework[2], and provides an integrated toolkit for usability evaluation, testing, measurement, and design

TURF Software Tool

TURF was programmed in .NET Framework and requires the Microsoft Windows Environment.

The TURF suite currently features Expert Review, User Testing, and Cognitive Task Analysis.

Prototyping, Analytic Coding, Focus Group are currently in development.

Using TURF: Expert Review

To illustrate how TURF can be used, we will walk through the NIST procedure[1], to conduct expert review in Figure A.

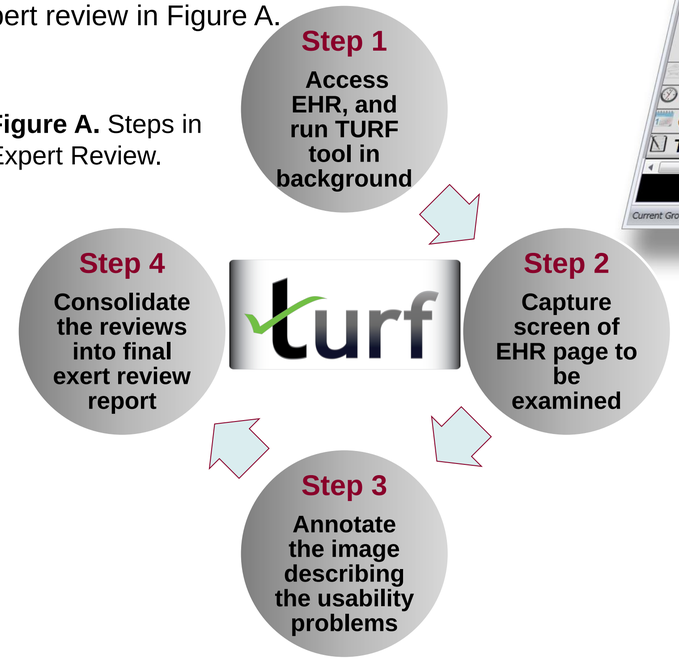

Figure A. Steps in Expert Review.

TURF In Action

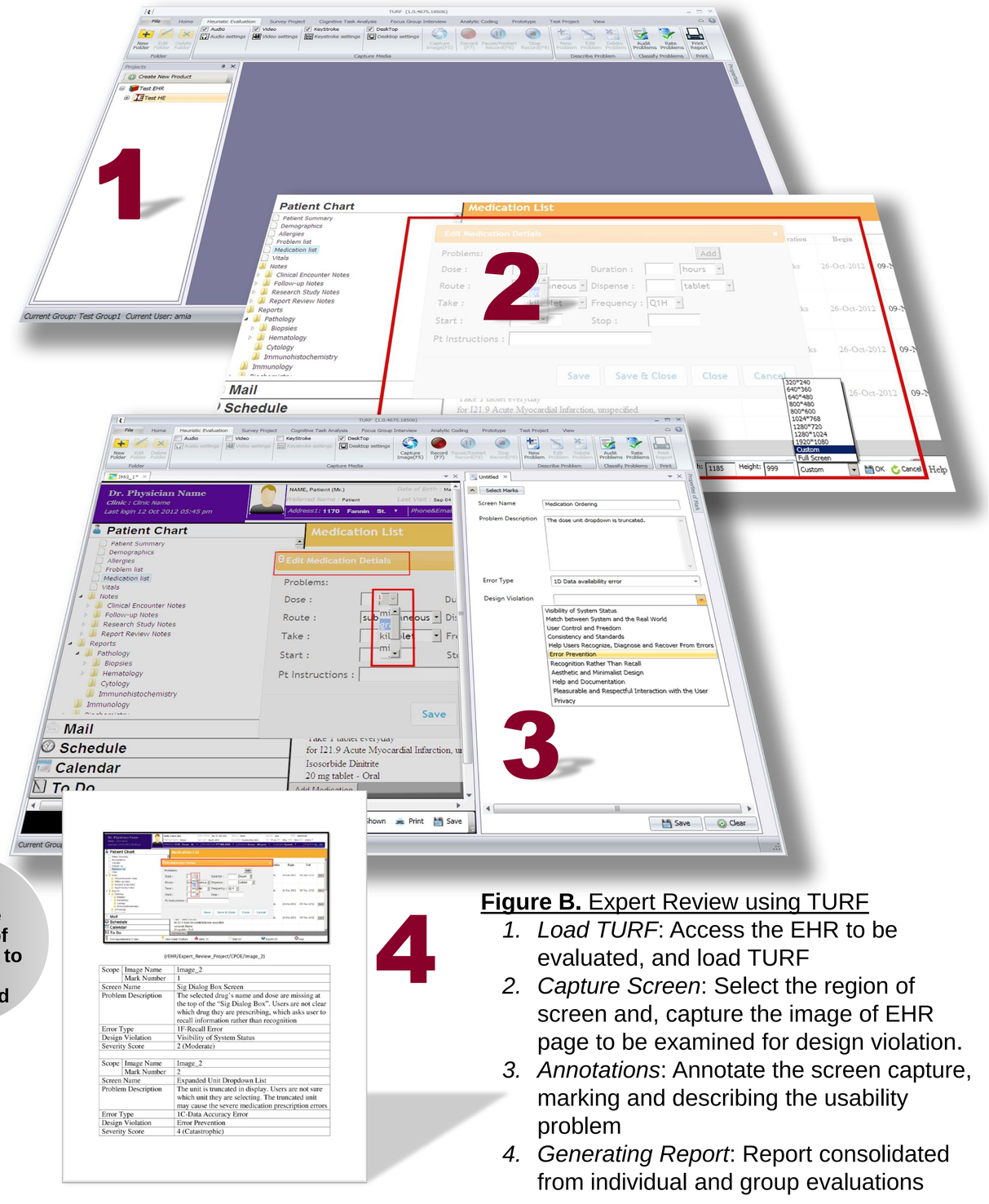

Figure B. Expert Review using TURF

1. *Load TURF*: Access the EHR to be evaluated, and load TURF
2. *Capture Screen*: Select the region of screen and, capture the image of EHR page to be examined for design violation.
3. *Annotations*: Annotate the screen capture, marking and describing the usability problem
4. *Generating Report*: Report consolidated from individual and group evaluations

Summary Of Conclusions

The TURF Software tool incorporates the critical features of conducting expert reviews and provides a mechanism to systematically organize usability data collected.

In future work we will conduct an evaluation of the tool to determine efficiency gains in conducting expert reviews.

Theater Demonstration

TURF: A Comprehensive Tool Suite for Usability Evaluation and Redesign

Nov 7, 2012 at 8.30 am.

Beta Testing

We are currently recruiting non-commercial users for beta testing. Contact SHARPC to participate.

Acknowledgements

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References

1 The National Institute of Standards and Technology (NIST) Interagency Reports 7804; Technical Evaluation, Testing, and Validation of the Usability of Electronic Health Records : 23 Feb 2012

2 Zhang J, Walji MF. TURF: Toward a unified framework of EHR usability J Biomed Inform. 2011;44(6):1056–67.

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