

#### Numbers, Numbers, Numbers

Andreas Bartel Christian Jansen User Experience Engineering Sun Microsystems, Inc





#### Data is Good Because

- Only a small portion of OO.o users can or are willing to share their usage experience verbally
- User reports are biased to individual perceptions and attitudes
- User reports are limited in their validity to uncover the real usability problems
- User reports consume a lot more effort to analyze
- We need to find usability issues that appear systematically and concern a wide range of users





## User Feedback





#### **User Feedback Extension**

- The "OpenOffice.org User Feedback Extension" is an extension that collects data about how OpenOffice.org is used
- This information is used to better understand how people use OpenOffice.org

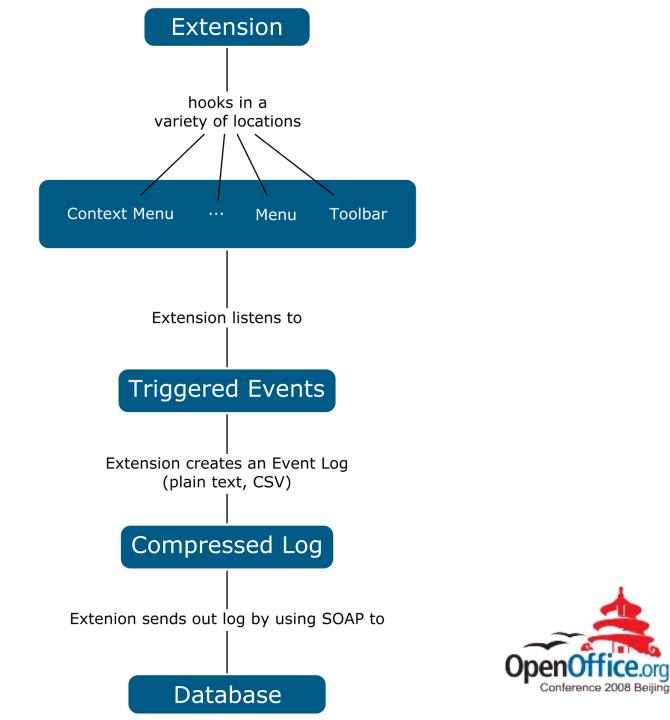




#### We Want To Know...

- Which commands are used frequently?
- Which are not?
- In which order do they use them?
- Are there features people request (IssueZilla, Mailing Lists, etc), because they do not find them?







#### Privacy

- The data is collected anonymously
- The extension does not collect any document related keyboard input
- The extension does not send any user specific type of data
- No relation ship between IP Address and sent report by SOAP request





# Next Steps





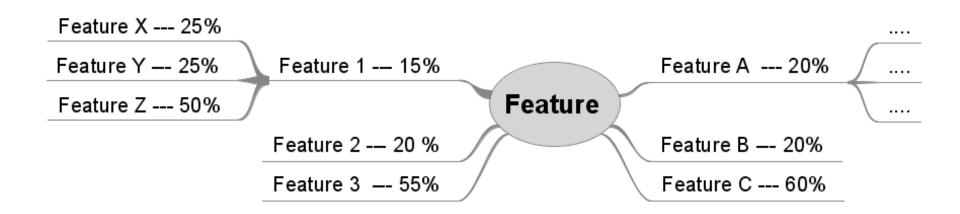
#### Analysis

- Results will be published on ux.openoffice.org
  - > OpenOffice wide use of features
    - Ranked by count & percentage
  - > Application wide use of features
    - Ranked by count & percentage
  - > Usage of features compared by applications
  - Feature usage compared by UI elements – menu, context menu, tool bar, keyboard shortcut
  - > Heat Maps
  - > Click Path Analysis





#### **Click Paths**







#### References

#### • Project Home:

http://wiki.services.openoffice.org/wiki/User\_Experience/Ope nOffice.org\_User\_Feedback\_Extension:





## IsoMetrics





### Why using a questionnaire

- No bias to an interviewer or a laboratory setting
  > Users remain in their natural environment
- Ability to reach a large set of users quickly
  > Online version
- A low-cost method
  - > No need for expensive equipment and laboratories
- A systematic approach that can be repeated easily
  > Redistribute the questionnaire at any time





### Why using IsoMetrics

- It is based on an international norm
  > ISO 9241-10
- It is fully standardized
  The questions, their order and the rating scale are fixed
- Proven in academia and in the field
  Meets the required objectivity, reliability and validity
- Available for summative and formative evaluation
  > Ability to clarify how and why usage is good or bad





#### What are the ingredients

- A set of 75 questions or statements called items
- Organized in 7 user perceived quality criteria
  - > Suitability for the task (15)
  - > Self descriptiveness (12)
  - > Controllability (11)
  - > Conformity with user expectations (8)
  - > Error tolerance (15)
  - > Suitability for individualization (6)
  - > Suitability for learning (8)
- A rating scale for the level of agreement





#### **IsoMetrics example**

		Pre- dominantly disagree		So - so		Pre- dominantly agree	
Index	controllability	1	2	3	4	5	No opinion
	The possibilities for navigating within the software are adequate.						
Т.3	The software makes it easy for me to switch between different menu levels.						
T.4	The software lets me return directly to the main menu from any screen.						
T.5	I can interrupt any dialog at any time.						
	It is always easy for me to evoke those system procedures that are necessary for my actual work.						
	It's easy for me to move back and forth between different screens.						





### What is the gain for OpenOffice.org

- How good?
  - > Does OO.o meet the criteria in ISO 9241-10?
  - > Where are our strengths and our weaknesses?
- Why bad?
  - > What are the reasons for usability problems?
  - > How can we improve?
- Which is better?
  - > Do we improve over major releases?





#### First IsoMetrics-S rollout

- Teamed up with a local insurance company
  - > VBG is using OpenOffice.org since 2004
  - > They have 1800 seats
  - > Very interested in improving usability and productivity
- Started collaboration in April 2008
  - > Clarified the context
  - > Ensured company-wide acceptance
  - > Implemented an online version using LimeSurvey
- Started collecting data in October 2008
  - > So far, over 180 responses

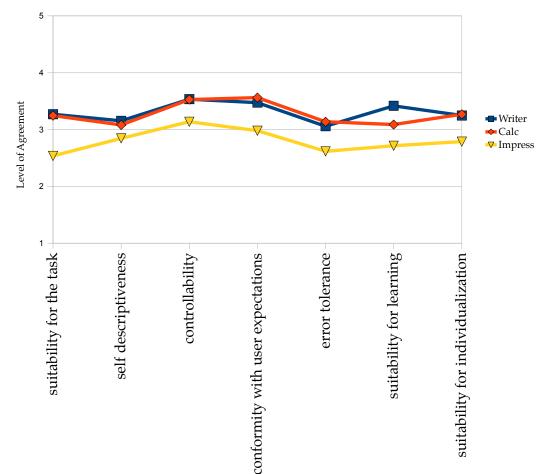




#### **Preliminary results I**

IsoMetrics-S Preliminary Results

User Perceived Quality of OpenOffice.org







#### **Preliminary results II**

Suitability for the task

Self descriptiveness

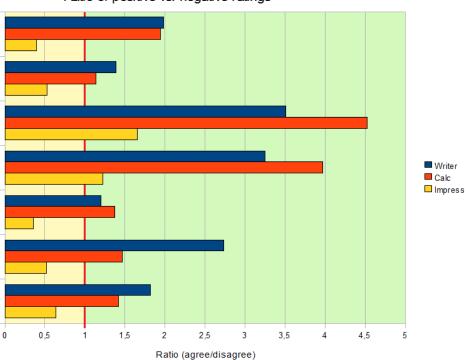
Controllability

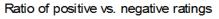
Conformity with user expectations

Error tolerance

Suitability for learning

Suitability for individualization









#### Is it bad doctor?

- We did not fail!
  - > 35% of users rate predominantly positively
  - > 25% of users rate predominantly negatively
- We did not win a trophy!
  > 40% of users certify us meritocracy
- We have a lot room for improvement
  - > Error tolerance
  - > Self descriptiveness
  - > Suitability for learning





#### What is to come

- A thorough data analysis
  - > 00.0 versions
  - > Linux vs. Windows
  - > Users' knowledge
- Rollout of IsoMetrics-L
  - > We want to know why things go wrong
- Benchmarking in other contexts
  - > How is user perceived quality rated in a different context
  - > Are there any commonality of usability problems





#### References

- http://www.isometrics.uni-osnabrueck.de/index.htm
- ISO (1992). ISO 9241 Part 10. Ergonomic requirements for office word with visual display terminals (VDTs), Part 10: Dialogue Principles, First Committee Draft, September 1991.
- Hamborg, K.-C, Vehse & B, Bludau, H.-B. (2004). Questionnaire Based Usability Evaluation of Hospital Information Systems. Electronic Journal of Information Systems Evaluation, 7 (1), 21-30.
- Gediga, G & Hamborg, K.-C. (1999). IsoMetrics: An usability inventory supporting summative and formative evaluation of software systems. In: H.-J- Bullinger & J. Ziegler (eds.). Human-Computer Interaction.
- Gediga, Hamborg & Düntsch (1999). The IsoMetrics Usability Inventory: An operationalization of ISO 9241-10, Behavior and Information Technology, 18, 151 - 164.









## Thanks!

#### 凝聚全球力量 绽放开源梦想





Andreas Bartel, Christian Jansen ux.openoffice.org