NICE:
Social Translucence through UI Intervention

Aaron Halfaker, Bryan Song, D. Alex Stuart, Niki Kittur, John Riedl
Wikipedia & the “Editor Decline”

Number of Active Editors
Wikipedia & the “Editor Decline”

Exponential Growth
Wikipedia & the “Editor Decline”

Exponential Growth

~ 55,000 editors
Wikipedia & the “Editor Decline”
What's the cause?

- WikiSym 2009: Suh et al., “The Singularity is Not Near”
  - Editor decline = editor retention problem
  - Rejection of new editor contributions rising
  - Population model: Competition for resources
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- WikiSym 2009: Suh et al., “The Singularity is Not Near”
  - Editor decline = editor retention problem
  - Rejection of new editor contributions rising
  - Population model: Competition for resources
- WISE'06: Zhang and Zhu, “Intrinsic motivation of open content contributors”
  - Editors demotivated by having their articles edited by others
  - Demotivation from peer-feedback can be measured
Reverts

- Definition: rejection of a editor's contribution to an article
- Strong feedback
- Necessary for quality control
- New editors most effected by negative feedback
- New editors getting reverted more

2. X. Zhang & F. Zhu. Intrinsic motivation of open content contributors. WISE'06
3. Suh et al. The Singularity is not near: slowing growth of Wikipedia. WikiSym'09
Reverts

- ~60% Obvious Vandalism
- ~40% Other
Reverts

Non-Vandalism: An example

Aberdeen F.C.

From Wikipedia, the free encyclopedia
(Difference between revisions)

Line 108:

The club are examining a move to a [[New Aberdeen Stadium]], which if given the go ahead, will be placed on the Loirston Loch and will seat around 22,000 but could be increased to 30,000–35,000 should a major event require a stadium of that size in Scotland.

Line 108:

The club are examining a move to a [[New Aberdeen Stadium]], which if given the go ahead, will be placed on the Loirston Loch and will seat around 22,000 but could be increased to 30,000–35,000 should a major event require a stadium of that size in Scotland. Some of the stadium could light up in the dark like Bayern Munich’s stadium (The Allianz Arena). If all the planning comes through on time the stadium is expected to be ready for the start of the 2013/2014 season.

== Supporters and nicknames ==

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Reverts

Non-Vandalism: An example

Aberdeen F.C.

- Dubious assertion.
- No citation.
Reverts

Non-Vandalism: An example

Aberdeen F.C.

- Dubious assertion.
- No citation.
- Correct & Valuable!
Outline

• Field study of NICE
• Measuring changes in editor behavior
• Results & Summary
NICE

- User Interface Modification for English Wikipedia
  - Installed by the editor performing the revert
  - **Newbie warning:** Notifies an editor when they revert a new editor
  - **Message box:** Easy to send a message to the reverted editor
- Live and available in English Wikipedia
Formed in 1903 as a result of the amalgamation of three clubs from Aberdeen, they rarely challenged for honours until the 1950s, when they won each of the major Scottish trophies under manager [[Dave Halliday]]. This level of success was surpassed in the

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Edit summary (Briefly describe the changes you have made)

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Please note:
Formed in 1903 as a result of the amalgamation of three clubs from Aberdeen, they rarely challenged for honours until the 1950s, when they won each of the major Scottish trophies under manager [[Dave Halliday]]. This level of success was surpassed in the

**Note:** You are reverting a new editor. Don't bite.
Analysis suggests that reverting this editor is likely to discourage them from making future contributions.
Social Translucence (Erikson et al. 2000)

1) Visibility (seeing a human)
2) Awareness (knowing another human is there)
3) Accountability (obvious consequences)
Social Translucence  (Erikson et al. 2000)

1) Visibility (seeing a human)
2) **Awareness** (knowing another human is there)
3) Accountability (obvious consequences)
Field Experiment

- Broadcast to forums & mailing lists used by Wikipedians
  - 49 reverting editors
    - Message Box
    - Newbie Warning
    - Message Box + Newbie Warning
    - Control
  - 487 reverted editors
Measuring changes in editor activity
Measuring changes
Measuring changes
Measuring changes
Measuring changes

difference?

Raw difference
• Favors career editors

Proportion difference
• Favors casual editors
Measuring changes
t.test of difference

Editor History

previous month

next month

Article History
Measuring changes

Metrics:
- quantity of work (revisions/day)
- quality of work (reverts/revision/day)

Substantial change:
- substantial increase (+)
- substantial decrease (-)
- no substantial change (0)

t.test of $\Delta$
Results & Discussion
Results

• Message Box (easy communication)
  • New editors: -Quality
  • Non-new editors: +Project pages, +Communication +Quality
Results

● Message Box (easy communication)
  • New editors: -Quality
  • Non-new editors: +Project pages, +Communication +Quality

● Newbie Warning (social awareness)
  • New editors: +Article work
  • Non-new editors: +Quality
Results

• Message Box (easy communication)
  • New editors: -Quality
  • Non-new editors: +Project pages, +Communication +Quality

• Newbie Warning (social awareness)
  • New editors: +Article work
  • Non-new editors: +Quality

• Box & Warning
  • New editors: +Article work (marginal)
  • Non-new editors: -Article work, +Quality
Summary

• Field Study of NICE
  • Increase awareness of the frailty of new editors
  • Ease communication with reverted

• Awareness:
  • significant improvement in new editor article work

• All conditions
  • significant improvement non-new editor quality

• A method for performing field studies of UI modifications in Wikipedia
Acknowledgments

• My co-authors
  • Bryan Song
  • D. Alex Stuart
  • Niki Kittur
  • John Riedl

• This work has been financially supported by the NSF: IIS 05-34420, OCI-0943148 and IIS-0968484.

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