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RITSUMEIKAN

SCORPION:

Slide Coordinator to Review Presentation Items Optimally and Nonverbally



Distributed & Collaborative Systems Lab.

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Agenda

- Background and Related Work
- The SCORPION System
- Evaluations
- Conclusions and Future Work

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Background and Related Work

- Existing means to edit presentation slides can be distracting or redundant
- Common design issues can be categorised (Garner and Alley, 2013) & (Sharp et al., 2007)
- A system to suggest messages, such as "Can you provide some evidence?" (Lee et al., 2020)
- Excessive moderation can affect the activeness of discussions (Perrault & Zhang, 2019)
- Screensharing is dependent on Wi-Fi and computers

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Objective

- Create a web application to remotely review presentation items **optimally (quickly with no redundancy) and nonverbally**
 - Reviewers = Use our proposed system, SCORPION, to give feedback
 - Editors = Fix those pages based on the feedback
- Determine if it is **quicker and less distracting** than existing means
- Determine if it is **function-wise satisfactory**

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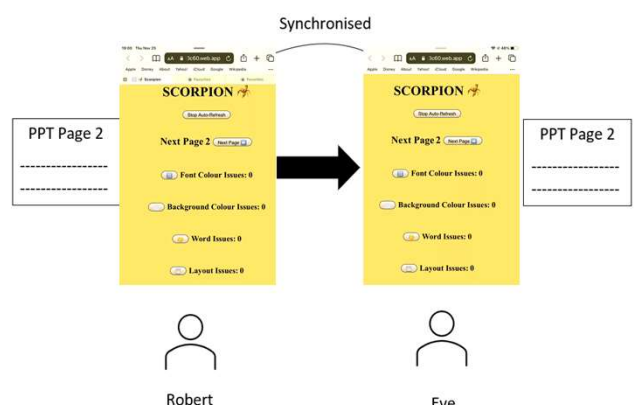
Presumptions

- What users do not have to worry about (Garner and Alley, 2013)
 - Font types and sizes are determined.
 - Everyone has the same professionalism.
 - Every necessary information and page is present and correct.
 - Everyone can speak the same languages equally.
- What they have to worry about (Sharp et al., 2007)
 - Background Colour Issues
 - Font Colour Issues
 - Word Issues (e.g.: word choices, typos, or grammatical issues)
 - Layout Issues (e.g.: unjustified paragraphs or obvious layout issues)

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Use Case

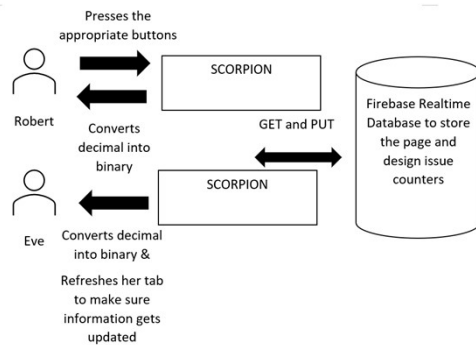


Robert (Reviewer) Eye (Editor)

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System Diagram



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What to compare SCORPION with?

- Why not previous works mentioned earlier?
 - **We have to compare time**, so we need to have their systems with us.
- Why not video conference software (e.g., Skype or Zoom)?
 - **SCORPION is fundamentally different** from them.
- Why not something like the PPT comment function?
 - It is often **used asynchronously**.
- Hence, LINE is the most appropriate choice.
 - Our objective is to **compare SCORPION with existing means users often use to review presentation slides**, so it is logical to choose LINE.

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Experimental Policies (1/2)

Purpose

Investigate the **speed, distractedness, and satisfactoriness** of SCORPION **compared with exiting means (LINE)** to edit presentation materials (MS PPT in this case)

Target

Students with decent designing skills became reviewers and the others became editors
5 groups of 2 (9 B3 and 1 B4)
Not allowed to talk to each other when editing

Method

Objective Performance (Time): Stopwatch
Subjective Performance (Distractedness and Satisfactoriness): Google Forms Questions

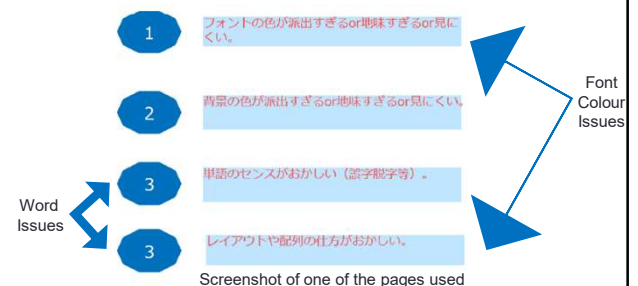
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Experimental Policies (2/2)

Task

Edited 2 similar but different PPT pages
0-4 design issue types per page
G1-G3 used LINE first and G4-G5 used SCORPION first



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Results (Time)

	LINE	SCORPION
G1	16:36	<u>07:52</u>
G2	09:35	<u>06:12</u>
G3	17:20	<u>07:46</u>
G4	06:25	<u>04:30</u>
G5	07:25	<u>05:36</u>

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Results (Distractedness)

	Yes	No
Was LINE distracting?	<u>4/10</u> (40%)	6/10 (60%)
If yes, why?	Received notifications (2) Received messages (1) Didn't know how to orchestrate the discussions (1)	N/A
Was SCORPION distracting?	<u>2/10</u> (20%)	8/10 (80%)
If yes, why?	Updates went unnoticed (2)*	N/A

*Debatable if this is "distracting", so its discussion will be moved

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Results (Satisfactoriness 1/2)

	Yes	No	Sometimes
Should it have more than 4 categories?	0/10 (0%)	<u>10/10</u> <u>(100%)</u>	N/A
(Editors only) Able to fix the designs just by being pointed out?	<u>3/5</u> <u>(60%)</u>	1/5 (20%)	1/5 (20%)
(Reviewers only) Had to point out design issues on PowerPoint?*	1/5 (20%)	<u>2/5</u> <u>(40%)</u>	<u>2/5</u> <u>(40%)</u>

*Reviewers were able to point out issues on pages by, for example, highlighting when editors were having difficulties

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Results (Satisfactoriness 2/2)

Response 1 (from a reviewer)	Response 2 (from an editor)	Response 3 (from an editor)
SCORPION should be more specific when telling where to fix (e.g. top, centre, bottom).	SCORPION was easier to use.	LINE might be dependent on how well one could form sentences.

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Discussion (Time)

Experiments	<i>Not sure of what they had to do during Round 1 when using LINE, affecting the time as a result</i>
→	G1-G3 used LINE first, whereas G4-G5 used SCORPION first SCORPION still made editing quicker Hence, order effects did not affect the time too much
Systems	<i>Button-based VS Chat-based</i>
→	Typing requires more physical movements than pressing the buttons (Shin et al., 2015)

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Discussion (Distractedness)

Experiments	<i>LINE was more distracting but not by much</i>
→	Might have hesitated to do something else when helping their senior student out
LINE	<i>Received messages and/or notifications</i>
→	Common issues when using social media applications

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Discussion (Satisfactoriness)

SCORPION	→ SCORPION made editing quicker, but should be more specific. The “no chat box” policy was proven effective, but it should have more features → Updates went unnoticed Should have made the counters more conspicuous
Experiments	→ LINE might be dependent on how well one could form sentences. Should have chosen groups based on their “experiences”

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Conclusions

Objective	Improve remote editing of presentation materials
Discovery	Able to make editing quicker and slightly less distracting than LINE due to its features
Future Work (Experiments)	Conduct mock experiments Conduct preliminary research to see if SNSs are distracting
Future Work (SCORPION)	Enable it to be more specific when giving where issues are

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