VICTORIA UNIVERSITY OF WELLINGTON
Te Whare Wānanga o te Ūpoko o te Ika a Māui

School of Engineering and Computer Science
Te Kura Mātai Pūkaha, Pūrorohiko

PO Box 600
Wellington
New Zealand

Tel: +64 4 463 5341
Fax: +64 4 463 5045
Internet: office@ecs.vuw.ac.nz

Proposal - aWall: Collaboration Support for Retrospectives

Simon Glew

Supervisor: Dr. Craig Anslow

Submitted in partial fulfilment of the requirements for
Bachelor of Engineering with Honours.

Abstract

Agile does not have a online tool that allows integration to online tools and allows users to use this integration with agile retrospectives. This is a problem as it means either product teams have to either be co-located or have to be all parts of agile meetings using a third party meeting tool such as Skype. Integrating an agile retrospective method within aWall will allow users to do all agile meetings within one online agile tool.

Introduction

aWall is a tool used to facilitate agile meetings using touch screens within software teams that helps them to have access to information in a single located place that everyone can access, unlike tools such as physical cardwalls. aWall is a project that is based in Switzerland at FHNW that was built by Professor Martin Kropp and Dr. Craig Anslow. The current aWall project progress can be found here: `https://www.youtube.com/watch?v=fzCnjnpRiTI`
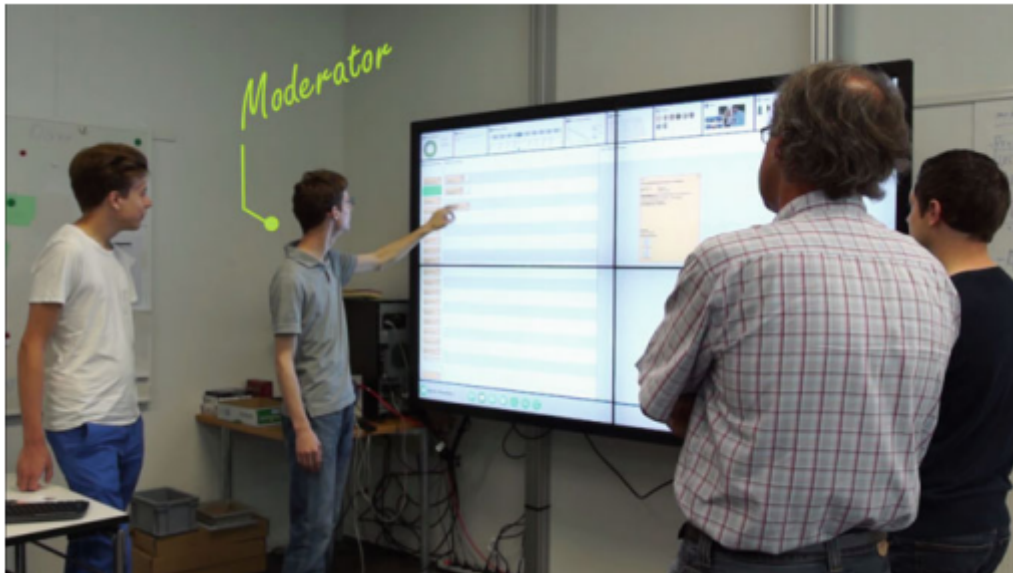

Figure 1: Project aWall - digital agile cardwall being used

This project is working on the retrospective part of the agile methodology to find and implement a solution that can be integrated within the current system that has already been built.

Background

Retrospectives are meetings held within agile teams, involving all members of the team and is held at the end and just after an iteration of work [?, ?]. The retrospective is used for not only celebrating the success of work from the last retrospective, but also the failures and lessons that can be learnt from them [?]. The retrospective is normally facilitated by a third party member who does not have a personal stake in the in the content or outcome of the meeting, therefore being able to remain neutral during the meeting [?, ?]. Retrospectives are used to reflect on the work done since the last retrospective and the problems that the team faced within this work. [?]. aWall is a online tool that allows for collaboration within a team when it comes to agile practices [?], including the aqile practice of retrospectives. With the tool being online, it allows teams to seperate members while still all members can include thoughts and feelings to the agile practices within the team.

The Problem

The problem that this project is attempting to solve is attempting to find a solution to help facilitate agile retrospectives that can support differently located members within a software

team. This is a problem as this puts a major restriction on software teams to attempt to co-locate their different software teams, as there isnt one tool that allows sprint retrospectives for differently located teams.

This will be achieved by creating a solution to facilitate different forms of agile retrospectives within the aWall product, by researching, implementing and evaluating the different solutions by user testing.

Proposed Solution

During this project, I would like to implement 4 different retrospective methods within the aWall project, with of them being implemented in the first four implementations.

The four methods that have been chosen are:

- The 3W's method/Mad, Sad and Glad.
  This method has been chosen due to my experience with it in both academic and industry use, this will be the first method to be implemented, during the first iteration of work. This method will be based off the method outlined within the Ester Derby book [**?**].

The next three methods have been chosen using the methods outlined within the Ester Derby and Norman Keith books [**?**, **?**].

- Timeline (5.1)

- Brainstorming/Filtering (6.1)

- Short Subjects (7.4)

All methods will be using the same activities to set the stage and conclude the retrospective, these are:

- **Setting the stage:** Check-in (4.1)

- **Conclusion:** +/Delta (8.1)

The Proposed time line for this project can be found below:

Iteration One: 6th April - 20th April

- Familiarization of the aWall codebase

- Finish Project Proposal

- Researching and Picking of the other 3 retrospective methods

- Agile Retrospective Method: 3W's

  - Planning
  - Implementation
  - Testing

Iteration Two: 20th April - 4th May

- Readings around Agile Retrospectives for background section of report

- Ethics Application (Due: 30th April)

- Agile Retrospective Method: Timeline

  - Planning
  - Implementation
  - Testing

Iteration Three: 4th May - 18th May

- Readings around Agile Retrospectives for background section of report

- Agile Retrospective Method: Brainstorming/Filtering

  - Planning
  - Implementation
  - Testing

Iteration Four: 18th May - 1st June

- Readings around Agile Retrospectives for background section of report

- Agile Retrospective Method: Short Subjects

  - Planning
  - Implementation
  - Testing

Iteration Five: 1st June - 8th June

- Progress Report

A plan for the second trimester of work will be finalized before the end of the final iteration (8th June). A rough outline plan can been seen below:

- **August:** User testing of different retrospectives.

- **September:** Implement the most effective method of retrospective into the aWall project and analysis of user testing.

- **October:** Writing of the final report.

Using the implementation of the four-different agile retrospective methods and the results from the user testing of the different methods, I should be able to implement the most effective retrospective method into the aWall project. All four retrospective methods that are going to be implemented will be done using the same technologies that the current aWall project uses, using jQuery as the frontend framework, due to this first stage not being integrated within aWall, there will be no backend to this project, with all required saving of information being done within the browsers memory.

The final solution that will be integrated within the aWall project will be using the full design and libraries of the current aWall project, this solution will also be integrated with the backend that is currently setup within the project to do the saving of the data instead of it being held within the browsers memory. This solution will override the current retrospective section of the aWall codebase.

Evaluating your Solution

The first part of evaluating the solution that is created is to do user testing on the four different retrospective methods, this will involve taking users through a agile retrospective using one of the four methods within the tool that is created. For this project, I will be attempting to user test on current third year engineering students within Victoria University currently taking the Engineering project courses (ENGR301 - 302). The tasks that I will get the users to perform will be based on what retrospective method is chosen as each method will need to have its own unique tasks to complete. Once the tasks have been completed, questions will be asked of the students of how they felt about using the specific retrospective method, these questions can be found in the ethics section below. Each team should hopefully participate within two different retrospectives using two different methods that were created.

Using the data gained from the user study, I will be able to make a decision on what parts of the retrospectives worked well and what didn't when used by users. From this decision, I will be able to craft a retrospective activity to go within the aWall codebase that uses the best parts that were found from the user study.

Resource Requirements

Ethics

Ethics approval will be needed for user testing in the second trimester of the year, the deadline for getting it is the during iteration two (30th April).
Ethics needs more details. Start filling out the forms and attach them with your proposal. This should include a consent form and the kinds of questions you will be asking during the study.

Safety

There are no safety concerns during the projects lifecycle.

Budget

Specialized equipment is required for this project. A large screen, touch overlay for the screen and a computer to run the device and aWall project will be required. Approximate value around $10,000. The quotes for the required equipment can be seen in the appendix.

Space and Access

The codebase for this project will be found on both the Victoria University Gitlab `https://gitlab.ecs.vuw.ac.nz/` and the FHNW Gitlab `https://gitlab.fhnw.ch`. The Gitlab for ecs will be the main source of management for the project with the issue tracker and wiki being used for the project.
This project will also require a room to house and demonstrate on the large touch screen. This room will also be used for conducting the user studies in the second Trimester, a date for this study will be confirmed at a later date.

Intellectual Property

All intellectual property for this project will be property of their respective parties

Bibliography

[1] *Code Space: Combining Touch, Devices, and Skeletal Tracking to Support Developer Meetings* (November 2011), ACM.

[2] ANSLOW, C., MARSHALL, S., NOBLE, J., AND BIDDLE, R. Co-located collaborative software visualization. 1–10.

[3] ANSLOW, C., MARSHALL, S., NOBLE, J., TEMPERO, E., AND BIDDLE, R. User evaluation of polymetric views using a large visualization wall. In *Proceedings of the 5th International Symposium on Software Visualization* (New York, NY, USA, 2010), SOFTVIS '10, ACM, pp. 25–34.

[4] CRAIG ANSLOW, P. C., AND JORGE, J. *Collaboration Meets Interactive Spaces*. Springer Nature, 2016.

[5] DERBY, E., AND LARSEN, D. *Agile Retrospectives: Making Good Teams Great*. Pragmatic Bookshelf, Raleigh, North Carolina, 2006.

[6] GHANAM, Y., WANG, X., AND MAURER, F. Utilizing digital tabletops in collocated agile planning meetings. In *Agile Development Conference, AGILE 2008, Toronto, Canda, 4-8 August 2008* (2008), pp. 51–62.

[7] GONCALVES, L., AND LINDERS, B. *Getting value out of Agile Retrospectives: A Toolbox of Retrospective Exercises*. Leanpub Publishing, 2013.

[8] GOSSAGE, S., BROWN, J. M., AND BIDDLE, R. Understanding digital cardwall usage. In *2015 Agile Conference, AGILE 2015, National Harbor, MD, USA, August 3-7, 2015* (2015), pp. 21–30.

[9] KEITH, N. *Project retrospectives: a handbook for team reviews*. Dorset House Publishing, New York, New York, 2001.

[10] LINDERS, B. 7 retrospective facilitation good practices, 2016.

[11] MARTIN KROPP, CRAIG ANSLOW, M. M. R. B. D. V., AND ZAHN, C. Enhancing agile team collaboration through the use of large digital multi-touch cardwalls. *LNBIP*, 283 (2017), 119–134.

Quote ID: NK160766

Created: 6-APR-2018
Expires: 20-APR-2018
Created by: Neth Ky

Victoria University of Wellington

DATACOM

Datacom Systems (Wellington) Ltd
Level 9, South Tower
Wellington 6011
New Zealand
Phone: 04 460-5661
Hardware: procurement@datacom.co.nz
Software: software@datacom.co.nz

Quotation details

Product Code	Description	Each	Qty	Total
HP6-00016	Surface Hub 55in	$12,747.37	1	$12,747.37
ND3-00006	HUB 55IN COMPLETE FOR BUS ADDTNL 2 YEAR SURFACE HUB 55IN COMPLETE FOR BUSINESS 2 YEARS ADDITIONAL NEW ZEALAND WARRANTY	$2,126.32	1	$2,126.32
HU7-00003	55in Rolling stand for Surface Hub	$3,052.63	1	$3,052.63
HV9-00027	SURFACE HUB STYLUS	$121.05	2	$242.10
3519527	55in Tailgate Wellington 0.45cbm	$479.17	1	$479.17

Indicative pricing for Delivery

*We highly recommend using our sensistive FREIGHT site-to-site service. This involves a delivery carried out by purpose built vehicles to cater to the sensitive nature of the SURFACE
HUB. This premium service is designed to make use of vehicles with hydraulic. Site-2-Site freight will have an hourly rate to be added on. Before we can quote more accurately on freight we will require the delivery form be filled in with all details.

TOTAL (GST Exclusive) $18,647.59

Terms and Conditions of this Quote:

This quote is valid to the stated expiry date and excludes errors and omissions. Prices do not include GST. Freight charges may be applicable. Should additional costs arise (such as those due to exchange rate fluctuations) after the generation of this quotation, our price to you will alter accordingly.

Once an order is placed, items returned will incur a re-stocking fee.

All products supplied by Datacom Systems Limited are provided in accordance with the Terms and Conditions set out in the Master Services Agreement between Datacom Systems Limited and the customer, or our Standard Terms and Conditions of Sale which are available on our website or on request. All goods are provided with the manufacturer's standard warranty unless otherwise specified. The Consumer Guarantees Act 1993 will not apply to any goods or services acquired for business purposes.

Quote ID: NK161008

Created: 11-APR-2018
Expires: 25-APR-2018
Created by: Neth Ky

Phil Mansford
Victoria University of Wellington
PO Box 600
Wellington 6140
Phone 04 463 5588

DATACOM

Datacom Systems (Wellington) Ltd
Level 9, South Tower
Wellington 6011
New Zealand
Phone: 04 460-5661
Hardware: procurement@datacom.co.nz
Software: software@datacom.co.nz

Quotation details

Product Code	Description	Each	Qty	Total
D5520	Ricoh D5520 Interactive flat panel 1 x Ricoh D5520 Interactive flat panel 1 x Ricoh interactive remote licence 1 x Ricoh controller OS 1 x Interactive pen sensor kit 1 x 12 Months Warranty 1 x Initial installation & Commissioning 1 x Frieght	$8,747.79	1	$8,747.79

TOTAL (GST Exclusive)	**$8,747.79**

Terms and Conditions of this Quote:

This quote is valid to the stated expiry date and excludes errors and omissions. Prices do not include GST. Freight charges may be applicable. Should additional costs arise (such as those due to exchange rate fluctuations) after the generation of this quotation, our price to you will alter accordingly.

Once an order is placed, items returned will incur a re-stocking fee.

All products supplied by Datacom Systems Limited are provided in accordance with the Terms and Conditions set out in the Master Services Agreement between Datacom Systems Limited and the customer, or our Standard Terms and Conditions of Sale which are available on our website or on request. All goods are provided with the manufacturer's standard warranty unless otherwise specified. The Consumer Guarantees Act 1993 will not apply to any goods or services acquired for business purposes.

TO ORDER THESE PRODUCTS:

Send the signed and completed quote or a valid purchase order detailing the products required to one of:

PROCUREMENT@DATACOM.CO.NZ

SOFTWARE@DATACOM.CO.NZ

PURCHASE ORDER NUMBER: _____

CONFIRMATION DATE: _____

ACCEPTANCE SIGNATURE: _____