Collaborative 3D Model Viewing on the Web Second Review

Alexandra Wörner, Dominik Studer, Ali Demiralp
Dev Sharma and Frederik Zwilling
Group 2

RWTH AACHEN UNIVERSITY

Agenda

1. Product Backlog
2. Definition of Done
3. Design Mockup and/or System functionality / Tests
4. Gantt Chart
5. Reflection
6. Demo
7. Conclusion

Product Backlog

Structure

- Unique ID for references
- Role - Desire - Benefit
- Ordered by priority

Progress

	Review 1	Review 2
#	28	33
Done	8	15

Tool: Google Spreadsheet

- Collaborative editing
- Commenting inside the document

Product Backlog

ID	User	Story	Priority	Effort	Done
31	As a developer	I want to finish the documents and presentation for the second review, to show our learning process and convince that our final product will be good.	10	6	
16	As an administrator	I want to have documentation about deployment, so that I can set up the application.	8	4	
14	As a user	I want to use the software on different browsers (Firefox, IE, Chrome, ..) and devices (Notebook, Tablet, Smartphone) , so I can use my favorite device and browser.	8	?	
20	As a lecturer	I want to provide my students a link, so that they can see the model (from a specified position)	7	3	
24	As a user with touchscreen	I want to move the model intuitively with touch-gestures so that I directly know how to move it.	7	3	
33	As a user	I want to have a good performance (low delay, smooth movement) of the view-synchronization, so I see changes imideately and have no abrupt changes.	7	5	
6	As a lecturer	I want to have an interface to upload 3D models (of different formats) to a database, so that other users can view it.	7	7	
22	As a user	I want to synchronize my view with an other device, so that we can view and study the same model together.	7	7	
4	As a lecturer	I want to be able to manipulate (tilt, zoom, move) a 3D model on my device and the students devices at the same time, so that I can show something.	7	8	
19	As a user	I want to have authorized access, so that other people can not modify or delete what I uploaded	6	6	
28	As a lecturer	I want to use the model of the human skull, to show it in my class.	6	6	
10	As a user	I want to see additional information (name, maybe description) for each model, so that I can know what it represents.	6	5	
5	As a lecturer	I want to be able to disable manipulation of the current 3D model by others, so that they may not interrupt the lecture.	5	6	
32	As a developer	I want to have automated tests to ensure correct functionality with low effort.	5	8	
17	As a user	I want to make screenshots of the current view on the model, so I can include it in my slides/exercise solution	4	5	
29	As a user	I want to have a explenation of the controls of the view, to know how controll it imediately	4	4	
⋮	⋮	⋮	⋮	⋮	⋮

Definition of Done (improvements since first review)

Short definition of done

Git Usage

- Branching work-flow
- Commit Messages
- Basic and necessary commands
- Dos and Don'ts

Programming Conventions

- JS, HTML, CSS, PHP, MySQL
- Mostly Google Guidelines

Testing

- Manual system-tests
- Automated front/back-end tests

Gantt Chart

Technologies

- MeshProcessing, RoleSDK, XAMPP, X3DOM, Downsampling, Format conversion

Design Mockup and/or System functionality / Tests

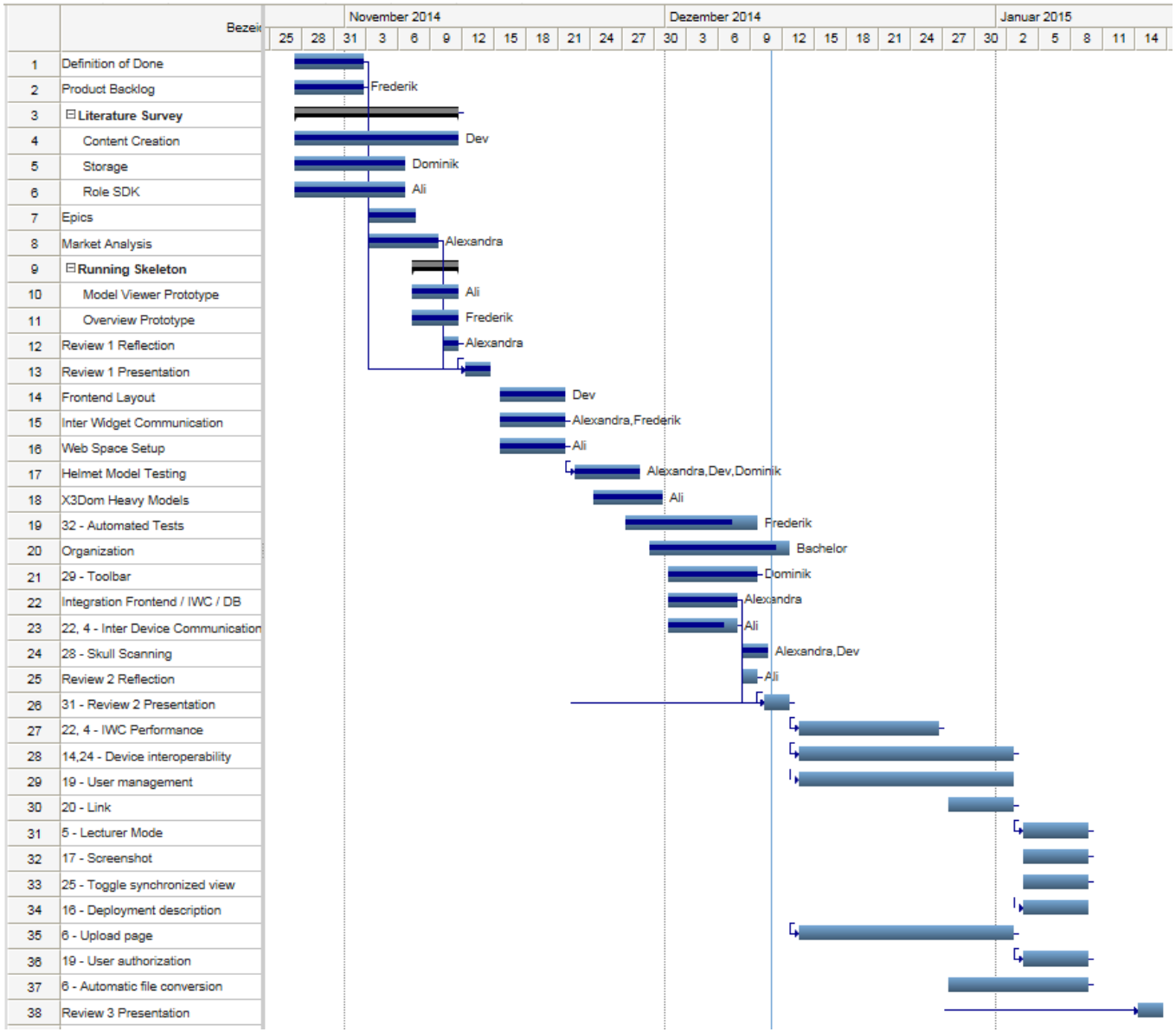
Frontend

- Records user interaction on a website
- Executes the recordings automatically
- Extend with assertions and verifications

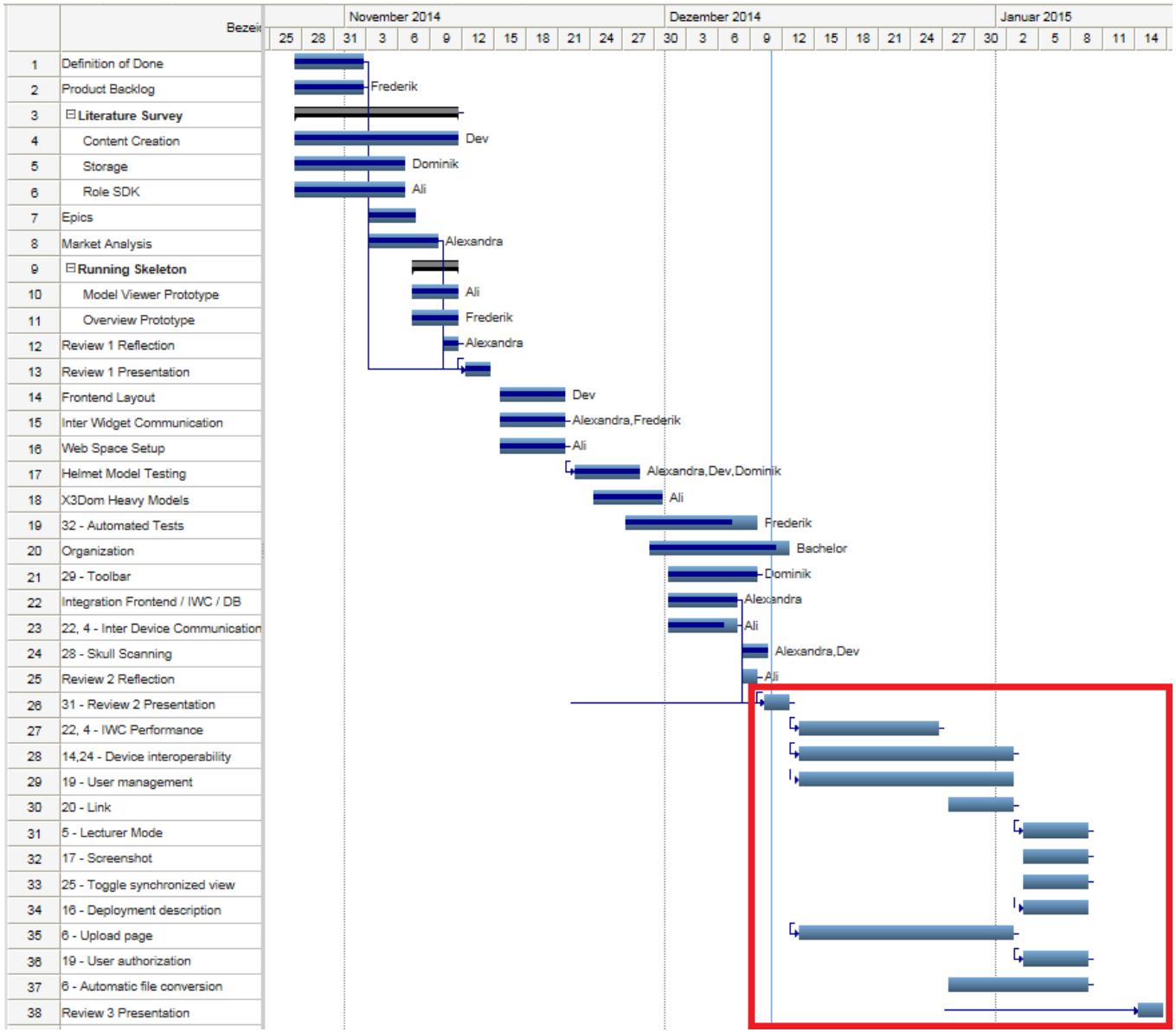
Backend

- JavaScript
- Write test suites containing multiple tests (specs)
- Execute tests by calling web page

Gantt Chart

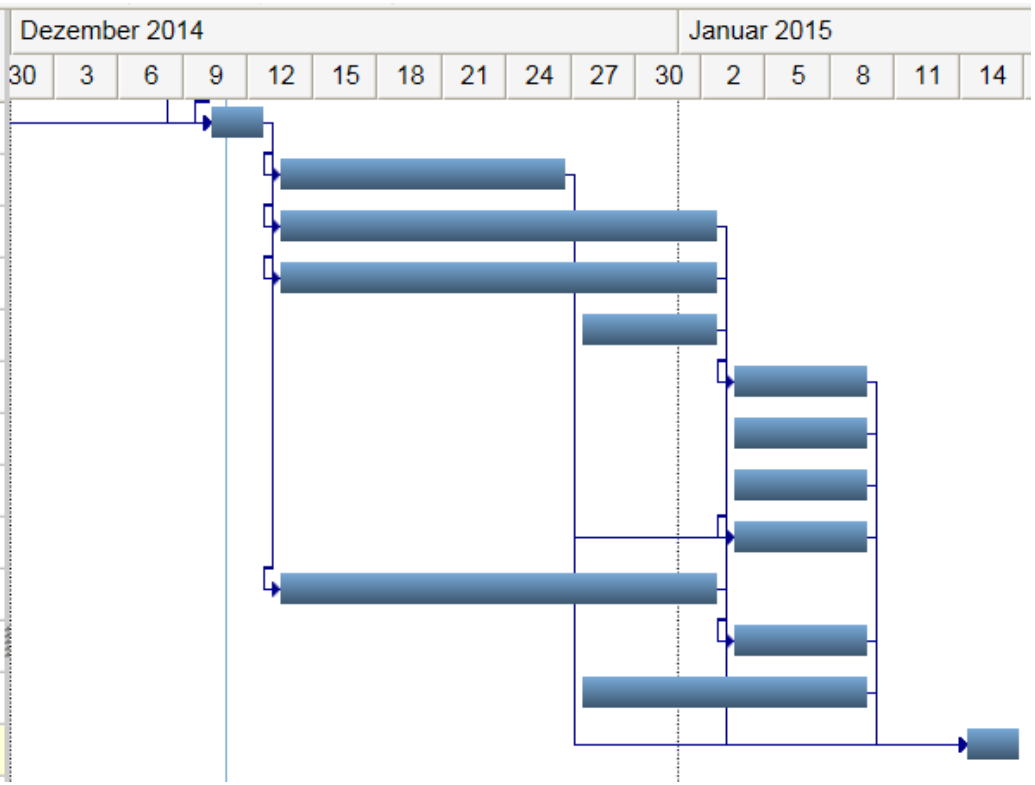

November 2014
Dezember 2014
Januar 2015
25 28 31 3 6 9 12 15 18 21 24 27 30 3 6 9 12 15 18 21 24 27 30 2 5 8 11 14
1 Definition of Done
2 Product Backlog
3 Literature Survey
4 Content Creation
5 Storage
6 Role SDK
7 Epics
8 Market Analysis
9 Running Skeleton
10 Model Viewer Prototype
11 Overview Prototype
12 Review 1 Reflection
13 Review 1 Presentation
14 Frontend Layout
15 Inter Widget Communication
16 Web Space Setup
17 Helmet Model Testing
18 X3Dom Heavy Models
19 32 - Automated Tests
20 Organization
21 29 - Toolbar
22 Integration Frontend / IWC / DB
23 22, 4 - Inter Device Communication
24 28 - Skull Scanning
25 Review 2 Reflection
26 31 - Review 2 Presentation
27 22, 4 - IWC Performance
28 14,24 - Device interoperability
29 19 - User management
30 20 - Link
31 5 - Lecturer Mode
32 17 - Screenshot
33 25 - Toggle synchronized view
34 16 - Deployment description
35 6 - Upload page
36 19 - User authorization
37 6 - Automatic file conversion
38 Review 3 Presentation
Frederik
Dev
Dominik
Ali
Alexandra
Alexandra,Frederik
Alexandra,Dev,Dominik
Bachelor
Alexandra,Dev

Gantt Chart


November 2014
Dezember 2014
Januar 2015
25 28 31 3 6 9 12 15 18 21 24 27 30 3 6 9 12 15 18 21 24 27 30 2 5 8 11 14
1 Definition of Done
2 Product Backlog
3 Literature Survey
4 Content Creation
5 Storage
6 Role SDK
7 Epics
8 Market Analysis
9 Running Skeleton
10 Model Viewer Prototype
11 Overview Prototype
12 Review 1 Reflection
13 Review 1 Presentation
14 Frontend Layout
15 Inter Widget Communication
16 Web Space Setup
17 Helmet Model Testing
18 X3Dom Heavy Models
19 32 - Automated Tests
20 Organization
21 29 - Toolbar
22 Integration Frontend / IWC / DB
23 22, 4 - Inter Device Communication
24 28 - Skull Scanning
25 Review 2 Reflection
26 31 - Review 2 Presentation
27 22, 4 - IWC Performance
28 14,24 - Device interoperability
29 19 - User management
30 20 - Link
31 5 - Lecturer Mode
32 17 - Screenshot
33 25 - Toggle synchronized view
34 16 - Deployment description
35 6 - Upload page
36 19 - User authorization
37 6 - Automatic file conversion
38 Review 3 Presentation
Frederik
Dev
Dominik
Ali
Alexandra
Ali
Frederik
Alexandra
Dev
Alexandra,Frederik
Ali
Alexandra,Dev,Dominik
Ali
Frederik
Bachelor
Dominik
Alexandra
Ali
Alexandra,Dev
Ali

Gantt Chart

	Bezeichnung
26	31 - Review 2 Presentation
27	22, 4 - IWC Performance
28	14,24 - Device interoperability
29	19 - User management
30	20 - Link
31	5 - Lecturer Mode
32	17 - Screenshot
33	25 - Toggle synchronized view
34	16 - Deployment description
35	6 - Upload page
36	19 - User authorization
37	6 - Automatic file conversion
38	Review 3 Presentation



Reflections on Team Process

Workflow

- Team meetings are more often
- Live web server, updated every integration
- GitLab issue tracker for internal organization and customer contact

New Colleagues

- Orientation phase completed
- Tasks and responsibilities
- Full time support

Reflections on Team Process

Four Areas of Organizational Performance

- Decreasing the learning curve of new employees
- Responding more rapidly to customer needs and inquiries
- Reducing rework and preventing “reinvention of the wheel”
- Spawning new ideas for products and services

Source: IBM Systems Journal, Vol 40, No 4

Demo

Conclusion and next steps