

Collaborative 3D Model Viewing on the Web

Second Review

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Group 2



Agenda

- 1 Product Backlog
- 2 Definition of Done
- 3 Gantt Chart
- 4 Reflection
- 5 Demo
- 6 Automated Testing
- 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
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
16	As an administrator	I want to have documentation about deployment, so that I can set up the application.	8
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
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
33	As a user	I want to have a good performance (low delay, smooth movement) of the view-synchronization, so I see changes immediately and have no abrupt changes.	7
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
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
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
19	As a user	I want to have authorized access, so that other people can not modify or delete what I uploaded	6
28	As a lecturer	I want to use the model of the human skull, to show it in my class.	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	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
32	As a developer	I want to have automated tests to ensure correct functionality with low effort.	5
⋮	⋮	⋮	⋮



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

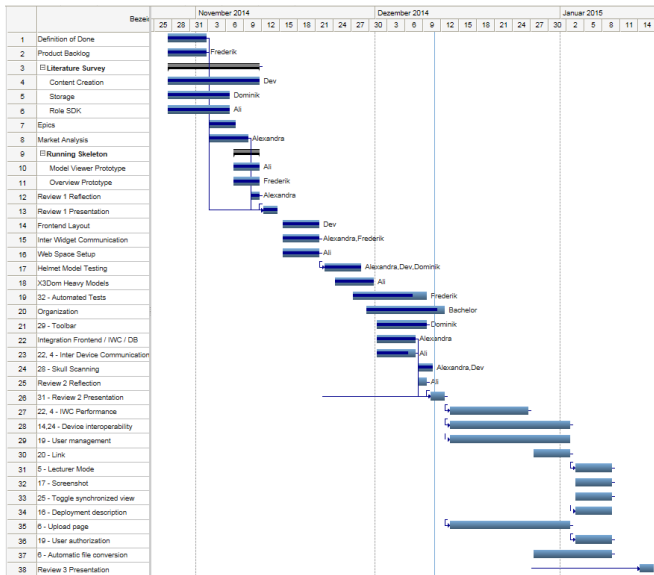
Gantt Chart

Technologies

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

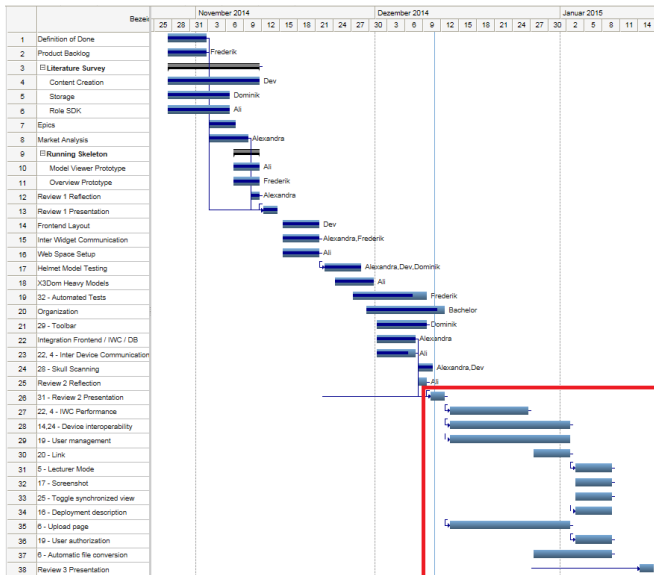


Gantt Chart



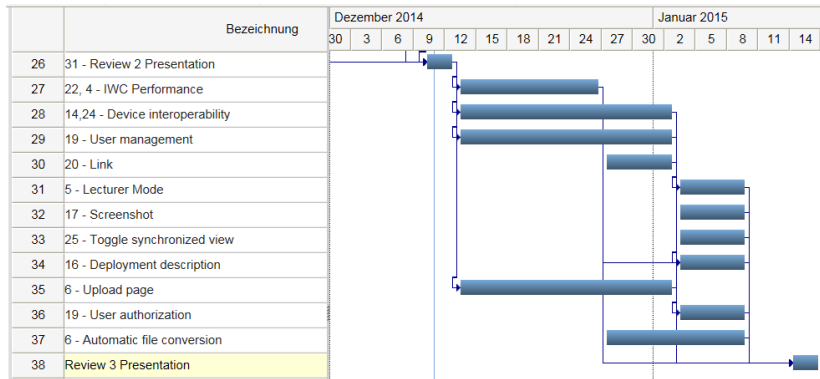


Gantt Chart





Gantt Chart



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





Automated Testing

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





Conclusion and next steps

Conclusion

- Improvements in organization and requirements
- Frontend prototype of final product for further evaluation
- Basic functionality working (device communication)
- Automated tests to ensure quality

Next Steps

- Improving performance
- Testing device interoperability
- User management
- Upload page