

Sprint Review

ROW Team 5

Introduction

Sensors and

actuators

Communicatio

User Interfac

Quality

End

ROW5 Sprint 4 Review

ROW Team 5

Amsterdam University of Applied Sciences https://rescueonwheels.github.io/

Januari 14, 2019



Introduction

Sprint Review

ROW Team 5

Introduction

Operationa scenario

actuators

Communicati

User Interfac

Quality

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Christiaan van Arum	Developer
Raphaël Bunck	Scrum Master
Nino van Galen	Developer
Martijn Vegter	Product Owner



Overview

Sprint Review

ROW Team 5

Introduction

scenario

actuators

Communication

User Interface

Documentation

Scrun

Quality assurance 1 Introduction

2 Operational scenario

3 Sensors and actuators

4 Communication

5 User Interface

6 Documentation

7 Innovatation

8 Scrum

9 Quality assurance



Operational scenario

Sprint Review

ROW Team 5

Introduction

Operational

scenario Sensors ar

actuators . . .

User Interface

Innovatation

Scrur

Quality assurance Building collapse due to:

- Earthquake;
- Explosion.
- Natural disasters:
 - Avalanche;
 - Landslide.
- General exploration



Sensors and actuators

Sprint Review

ROW Team 5

Introduction

Sensors and

actuators

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User Interrace

Innovatation

C

Quality assurance

Sensor(s):

■ Distance sensor (ultrasonic sensor HC-SR04).

Actuator(s):

Custom double axis servo platform.

Other:

Fisheye lens.



Communication

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ROW Team 5

Introduction

scenario

Sensors an actuators

Communication

User Interface

Documentation

Scrun

Quality assurance

End

 $\mathsf{Rover} \leftrightarrow \mathsf{Cockpit} :$

Socket.IO.

 $\mathsf{Rover} \to \mathsf{Tincidunt} :$

H.264 over HTTP.

Cockpit ← Controller:

- Bluetooth;
- USB.



User Interface: Epicenter

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ROW Team 5

Introductio

Scenario

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User Interface

Quality

Cockpit

oJH0ALisTGebctA_AAAA (::ffff:192.168.0.246)

Rover

dCWxZubMufkwWuTeAAAB (::ffff:192.168.0.246)

Connection Queue

oJH0ALisTGebctA_AAAA dCWxZubMufkwWuTeAAAB Connect



User Interface: Chrome

Sprint Review

ROW Team 5

Introduction

Operationa

Sensors and

Communication

User Interface

Documentation

Innovatation

Scrun

Quality





User Interface: Tincidunt

Sprint Review

ROW Team 5

Introduction

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Sensors and

actuators

Communicatio

User Interface

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Scrum

Quality





Documentation

Sprint Review

ROW Team

Introduction

Sensors an

actuators

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Documentation

Scrum

Quality assurance

- Rover Rescue System Business Case
- Rover Rescue System (Technical) Documentation
- Rover Rescue System Manual Application
- Rover Rescue System Manual Epicenter
- Rover Rescue System Manual Rover
- Rover Rescue System Project File
- Rover Rescue System Sprint Review 1
- Rover Rescue System Sprint Review 2
- Rover Rescue System Sprint Review 3
- Rover Rescue System Sprint Review 4



Innovatation

Sprint Review

ROW Team 5

Introductio

Sensors an

Communication

User Interface

Innovatation

Quality

- Virtual Reality as video output;
- Virtual Reality connected to the camera;
- Automated prevention systems:
 - Auto-stop to prevent crashes;
 - Auto-stop based on communication events;
 - Auto-reset of camera view based on communication events;
 - Scalable for large scale operations.



Scrum

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ROW Team 5

Introductio

Sensors ar

Communication

User Interface

Innovatation

Scrum Quality

- Use of GitHub projects;
- Use of GitHub because of third-party integrations;
- Use of ZenHub for automated issue tracking;
 - Isssues
 - Epics
 - Pull Requests
- Use of ZenHub for Burndown and Velocity tracking;



Scrum: Cumulative Flow

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Introduction

scenario

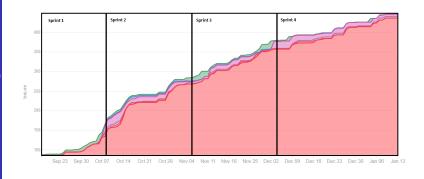
actuators

Communicatio

User Interrace

Scrum

Quality





Sprint Review

ROW Team 5

Introductio

Operationa

Sensors and

Communication

User Interfac

Documentati

Innovatation

Scrum

Quality assurance



119 Total Story Points

119 Completed / 0 Remaining

72 Total Issues and Pull Requests

72 Completed / 0 Remaining



Sprint Review

ROW Team 5

Introductio

Operationa

Sensors an

Communication

User Interfac

Documentat

Innovatation

Scrum

Quality assurance



219 Completed / 0 Remaining



Oct 21 Tue 23 Thu 25 Sat 27 Mon 29 Weblindember Sat 03 Mon 05 Wed 07 Fri 09



Sprint Review

ROW Team 5

Introduction

Operationa

Sensors and

Communicatio

User Interfac

Documentati

Innovatation

Scrum

Quality assurance



130 Total Story Points

130 Completed / 0 Remaining

74 Total Issues and Pull Requests

74 Completed / 0 Remaining



Sprint Review

ROW Team 5

Introduction

Operationa

Sensors ar

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Innovatation

Scrum

Quality assurance



163 Total Story Points

139 Completed / 24 Remaining

91 Total Issues and Pull Requests

82 Completed / 9 Remaining



Quality assurance

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ROW Team

Operationa

Sensors an actuators

Communication

User Interface

Scrum

Quality assurance

- Use of GIT submodules;
- Custom mocks for simulation usage;
- Protected branches with following rules:
 - Require pull request reviews before merging;
 - Require status checks to pass before merging
 - Travis-CI used for tests and code style;
 - CodeClimate used for unbiased code quality;
 - Coveralls is used for code coverage.
- Definition of Done;
- Definition of Ready.



Sprint Review

ROW Team 5

Introductio

Operationa scenario

Sensors and actuators

Communication

User Interfac

Documentation

Innovertation

Quality

End

Any Questions?



Sprint Review

ROW Team 5

Introduction

Operationa scenario

Sensors and

Communicatio

User Interface

Documentation

Innovatation

c

Quality

End

The End