

BLOCK-SEMINAR: MIXED REALITY APPLICATIONS FOR HUMAN-ROBOT COLLABORATION

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09.09.2016

OVERVIEW

- ▶ Progress
- ▶ Planned Features
- ▶ Schedule
- ▶ Next Steps

**HARD- &
SOFTWARE**

PROGRESS

- ▶ Improved interaction with GearVR
 - ▶ Drag-and-Drop added
 - ▶ Created User-Interface
- ▶ Implemented Augmented Reality for Tango
 - ▶ Drag-and-Drop added???

PROGRESS

- ▶ New tools for HTC VIVE:
 - ▶ User-Interface Menu on controller
 - ▶ Warp to position
 - ▶ Point to position
 - ▶ pick-and-place

VIDEODEMO

PLANNED FEATURES

PLANNED FEATURES

- ▶ VoiceChat
- ▶ Recording of the Scene (Object and Participants positions)

PLANNED FEATURES

- ▶ Additional interactions with HTC Vive
 - ▶ inspect and annotate objects
 - ▶ use controller as Laserpointer (sending)

PLANNED FEATURES

- ▶ Additional interactions with GearVr
 - ▶ inspect and annotate objects
 - ▶ use View-Direction as Laserpointer (sending)

PLANNED FEATURES

- ▶ Additional Features with Project Tango
 - ▶ automatically map coordinates (using Vuforia)
 - ▶ receive additional information about objects

PLANNED FEATURES

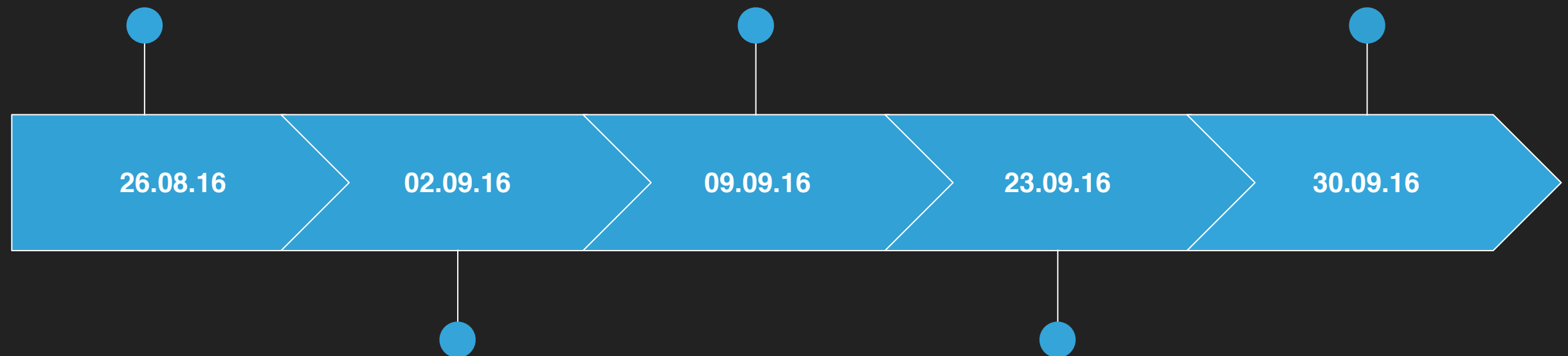
- ▶ Additional Features for PC-Client
 - ▶ Switch between all participants views
 - ▶ Change permissions of participants
 - ▶ Can set possible interactions with Objects

SCHEDULE

TECS communication
between all devices

Desktop connection, final
system architecture

final demo and video
submission



Baxter communication,
pick'n'place by Vive and
GearVR

final implementation
including features and
interactions

GOALS FOR NEXT MEETING

- ▶ Final Implementation
- ▶ Including Planned Features and Interactions

QUESTIONS?