Welcome to the ISMAR Hackathon. This is a new approach evolving from the previous years Tracking Challenge to engage scientists and AR practitioners in showcasing their latest techniques in fun real-world challenges.

The aim is to encourage rapid idea creation around AR technologies that will drive future applications and highlight areas of future research value, demonstrating technologies readiness/adaptability as opposed to hand-crafted demos, and promoting the fundamental role of multi-disciplinary team work.

The principle is simple: Several teams will work during 4 days towards completing an AR application designed around one specific topic that the organizers disclose at the very beginning of the Hackathon. The participants will be given this theme as a broad topic, with a few related props, and they are expected to implement an AR application with their own interpretation of this surprise theme, and using one or several of the provided props.

The participants have a special room within the ISMAR conference venue for working on their project. Prior to the Hackathon, additional guidelines are given about what to expect in the event (e.g: hardware available, venue, etc), so team members can develop resources prior to the Hackathon, such as 3D models, audio sources, animations, algorithms. They are expected to bring their own computing resources and to be sure to have an Augmented Reality system with them. They should be able to use this as a starting point to implement their contribution.

To make all participants work on similar grounds, we define six technical categories:

- Marker based tracking,
- Sparse tracking and mapping with monocular cameras and stereo cameras,
- Dense tracking and mapping with depth sensors,
- Sensor fusion and other sensing modalities (IMUs, Thermal cameras, event-based cameras),
- Rendering,
- Interaction and UI methods.

Each team should produce a demo showcasing their interpretation of the theme in one of these categories. This aims to level the grounds for teams with high expertise in single topics.

As a way of concluding this first ISMAR Hackathon, a Wrap-up Meeting is scheduled on September 21st, 2016. We look forward to seeing everyone at the first ISMAR Hackathon!