

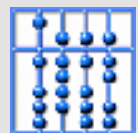
Towards a System of Patterns for Augmented Reality Systems

International Workshop on Software
Technology for Augmented Reality Systems



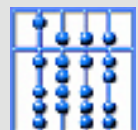
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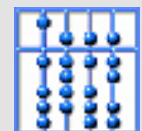
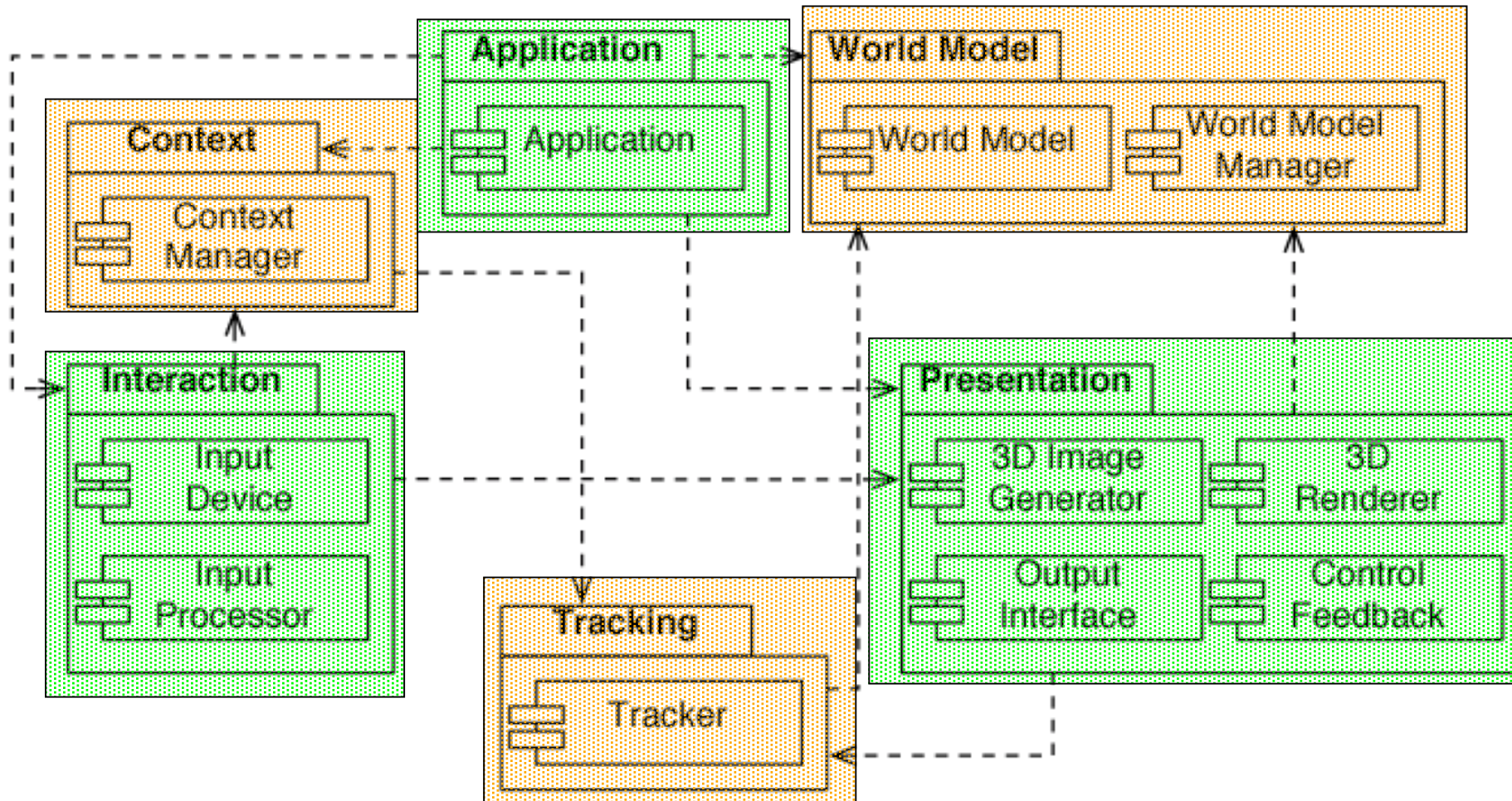


Goals

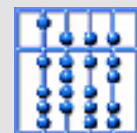
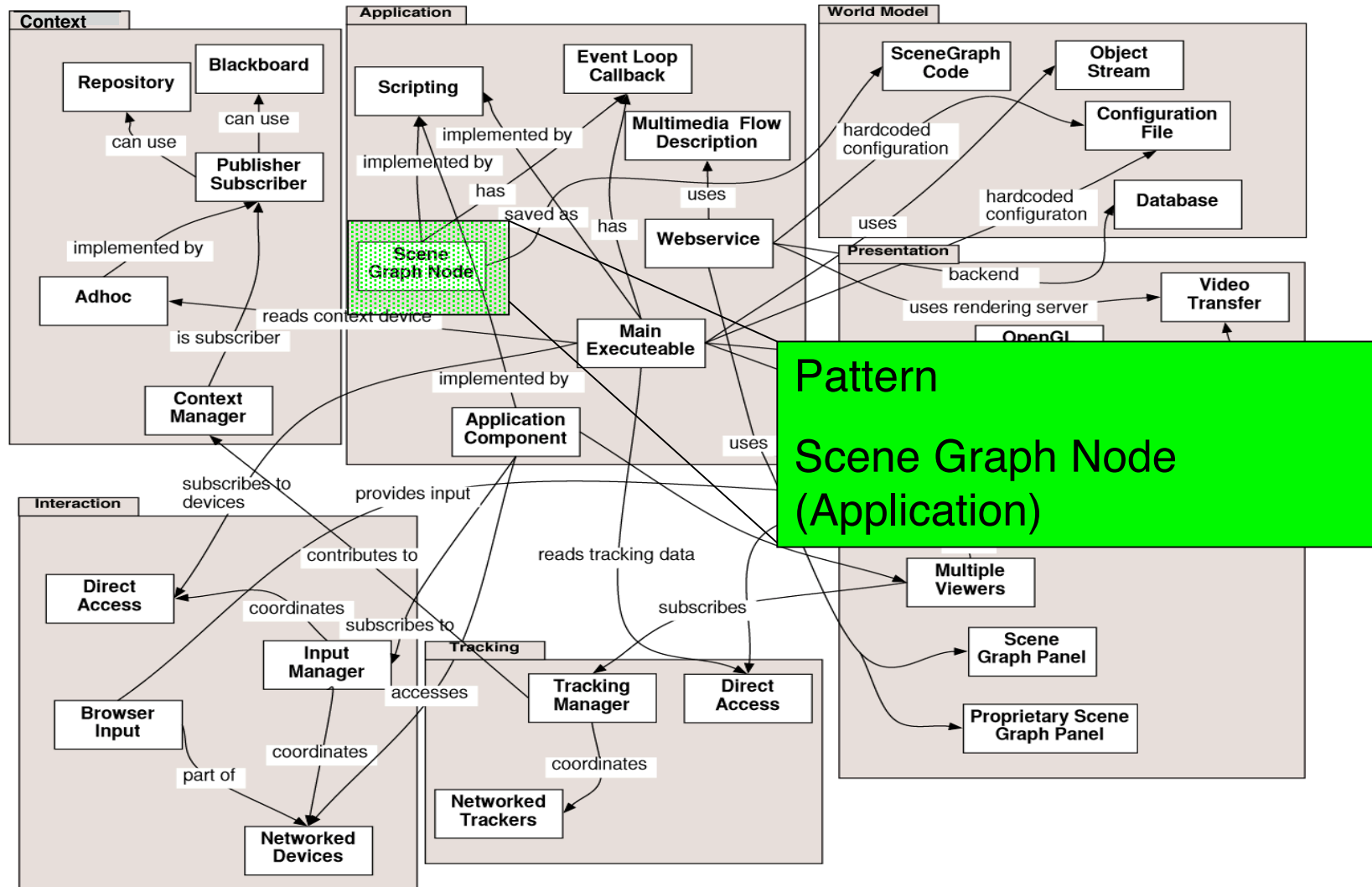
- Assemble catalogue of patterns for AR
 - Description of existing systems
 - Development of new ones
 - Find right abstractions for approaches -> patterns
 - Pattern archeology in AR and VR literature
 - ISMAR interactive poster
 - Collaboration with other AR researchers
- Test approach on existing AR systems
 - Extend analysis to VR systems
- Develop system of patterns for AR
 - Based on subsystem decomposition of AR systems
 - Relate patterns of catalogue



AR Subsystem Decomposition



A System of Patterns



Example Pattern Description (abbrev.)

Name: Scene Graph Node (Application)

Goal: Embed application in scene graph.

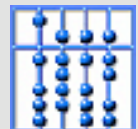
Motivation: In AR, user interaction is connected with the spatial environment. With this approach, the application is seamlessly embedded in the environment.

Description: A scene graph models the world around a user as a tree of nodes. Each node can be any type object, usually graphical ones. But there are also nongraphical objects that include control code.

Usability: In combination with a scene graph-based renderer.

Consequences: The Scene Graph Node pattern handles the control flow to the underlying scene graph platform. This offers an easy way for the implementation of shared applications for locally nearby users. The 3D interface can be shared among several users but displayed for each from a different view.

Known use: Studierstube, Tinmith, MARS



Thank you

- Any questions?

