

Modeling CCM with AADL

Jean-François Tilman

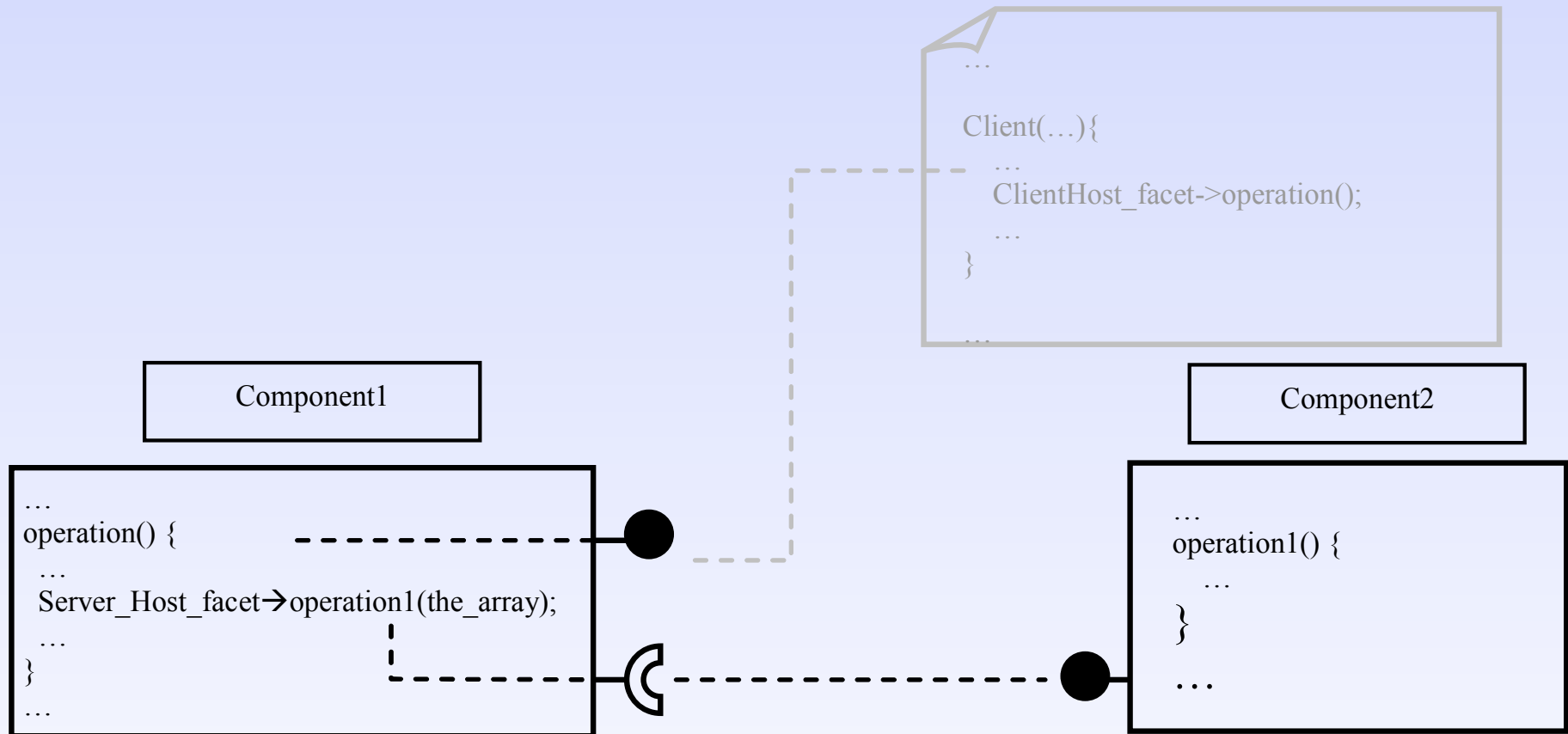
AADL meeting
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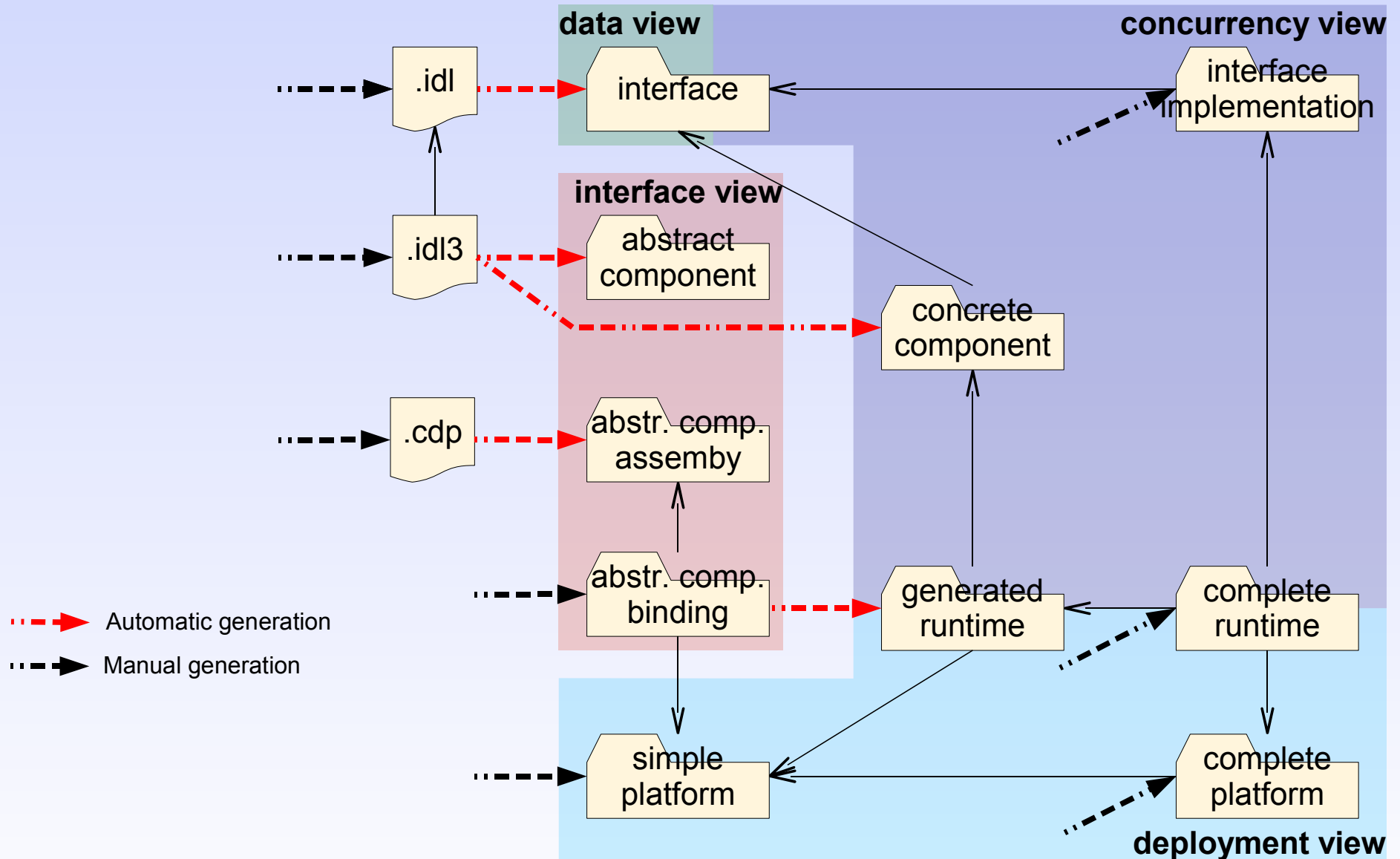
Context

- Aim: Developing CCM component based systems with AADL
- Use of LightweightCCM
- Other constraints:
 - compatibility with other AADL tools
 - compatibility of non-CCM developments

Reference example



Development process (draft)





Spices views (1/2)

Spices defines four views (inspired from Assert)

- **Interface view**
 - abstract systems representing the components
 - data accesses represent facets and receptacles
 - used to define and check the composition
 - never instantiated but transformed into other AADL components in the concurrency view
- **Data view**
 - part of the final AADL model
 - represents the data types



Spices views (2/2)

- Concurrency view
 - part of the final AADL model
 - represents the runtime elements implementing the components
- Deployment view
 - part of the final AADL model
 - represents the execution platform and other elements of the final system

- Improvement of the development process
 - Enter into details of the representation
 - Raise current problems with the language
 - Contribute to AADL v2.0
- Prototyping of automatic generation
 - Prototype tools to perform the automatic transformation of CCM models into AADL



AADL needs

- Spices takes advantage of AADL v2.0:
 - Improved provides/requires data access
 - New provides/requires subprogram access
- Propositions to slightly extend these mechanisms (e.g., data access connections between subprogram features)
- Spices and its tools are based on OSATE
 - => Need for a support of these constructs by OSATE *as soon as possible*