



DesignNews

Embedded Software Design Techniques

DAY 3 : Architecture Verification Techniques

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Webinar Logistics

- Turn on your system sound to hear the streaming presentation.
- If you have technical problems, click “Help” or submit a question asking for assistance.
- Participate in ‘Group Chat’ by maximizing the chat widget in your dock.
- Submit questions for the lecturer using the Q&A widget. They will follow-up after the lecture portion concludes.

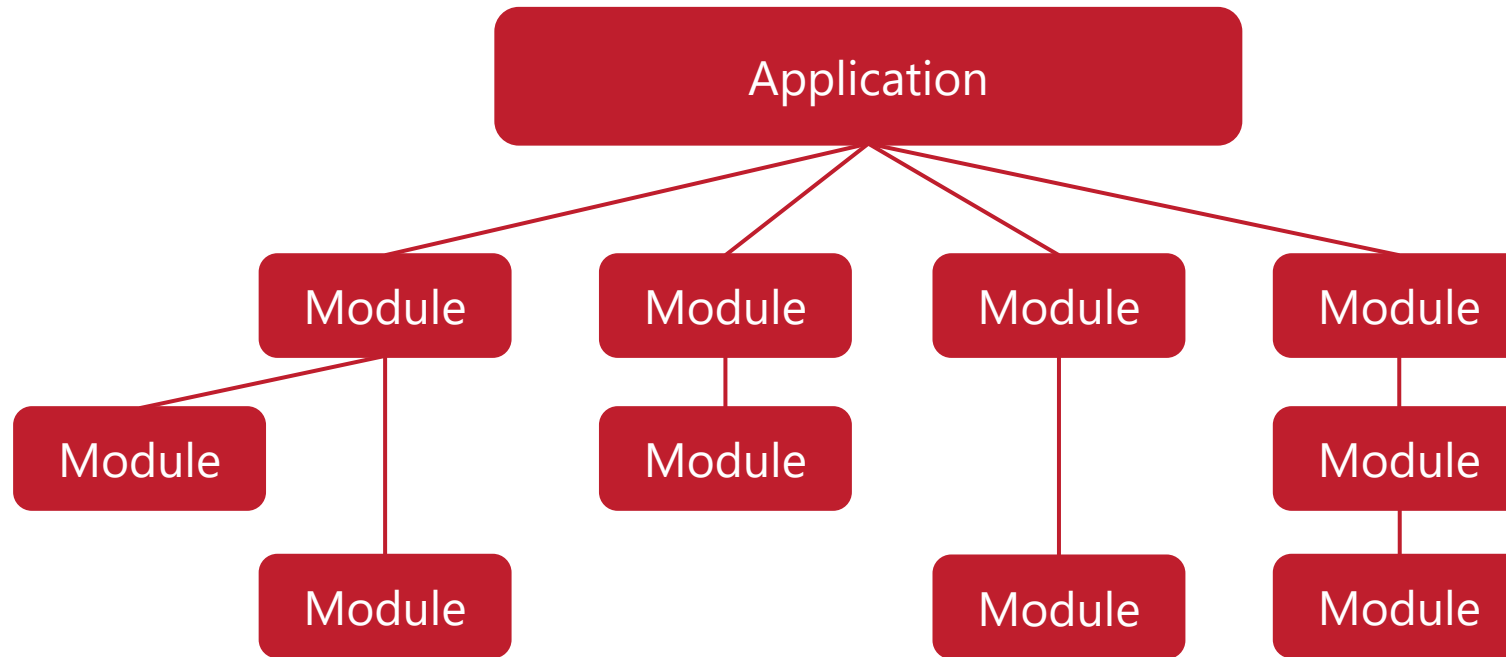
Course Sessions

- Software Architectures 101
- Designing RTOS-based Applications
- **Architecture Verification Techniques**
- Designing Quality into Embedded Systems
- Software Configuration Management Techniques

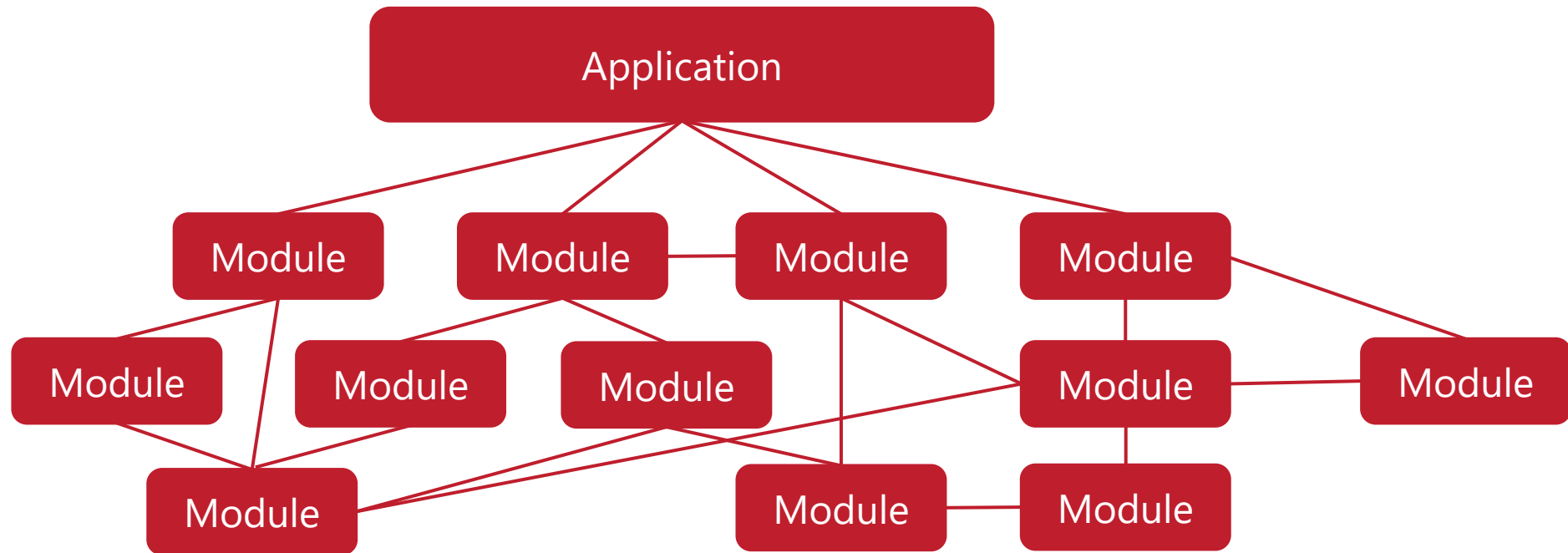
1

The Architecture Problem

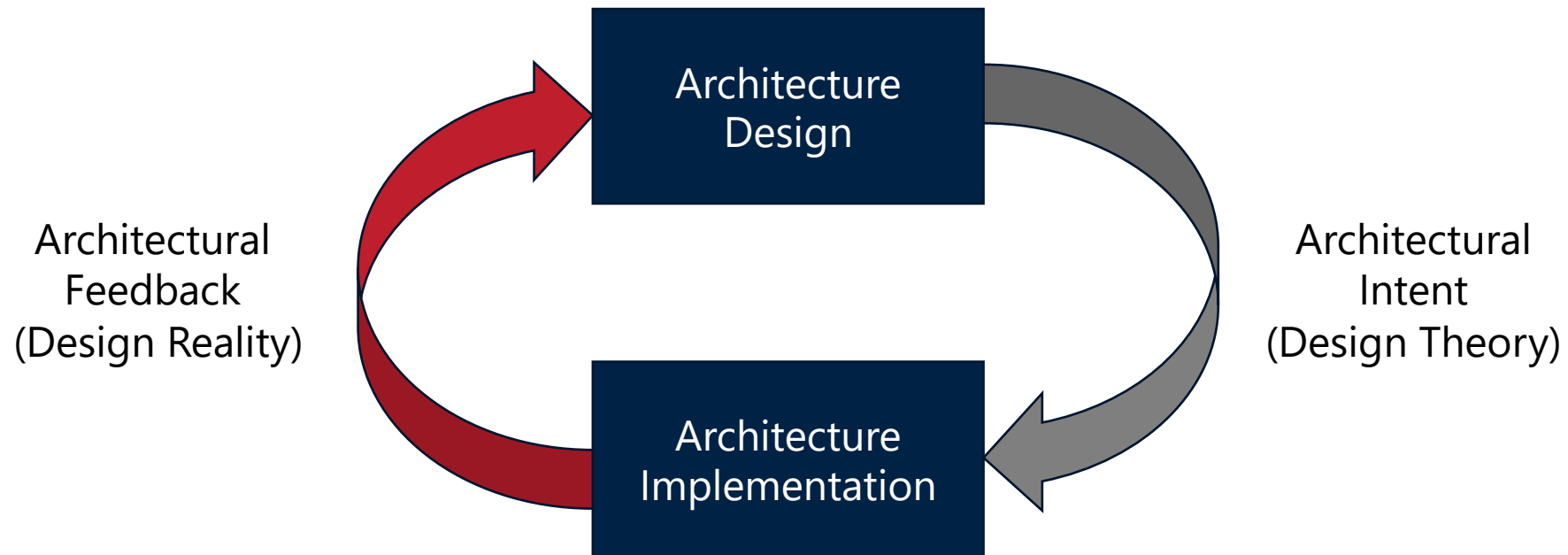
The Design



The Implementation



Architecture Feedback Loop



How often does your architectural design match the implementation?

- 100%
- Greater than 75%
- Between 50 – 75%
- Less than 50%

2

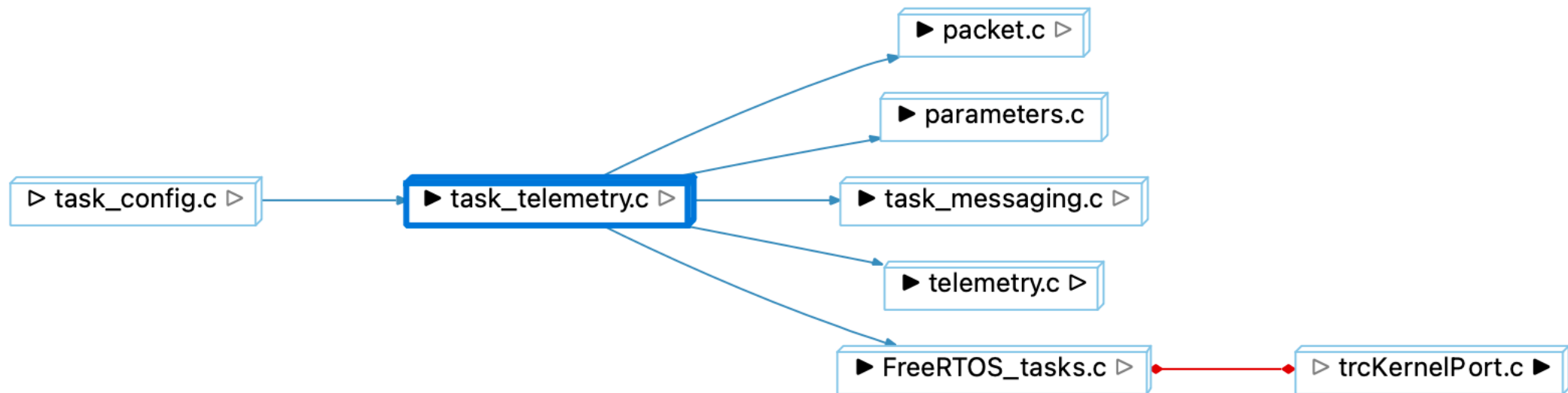
Architecture Analysis

Architectural Analysis

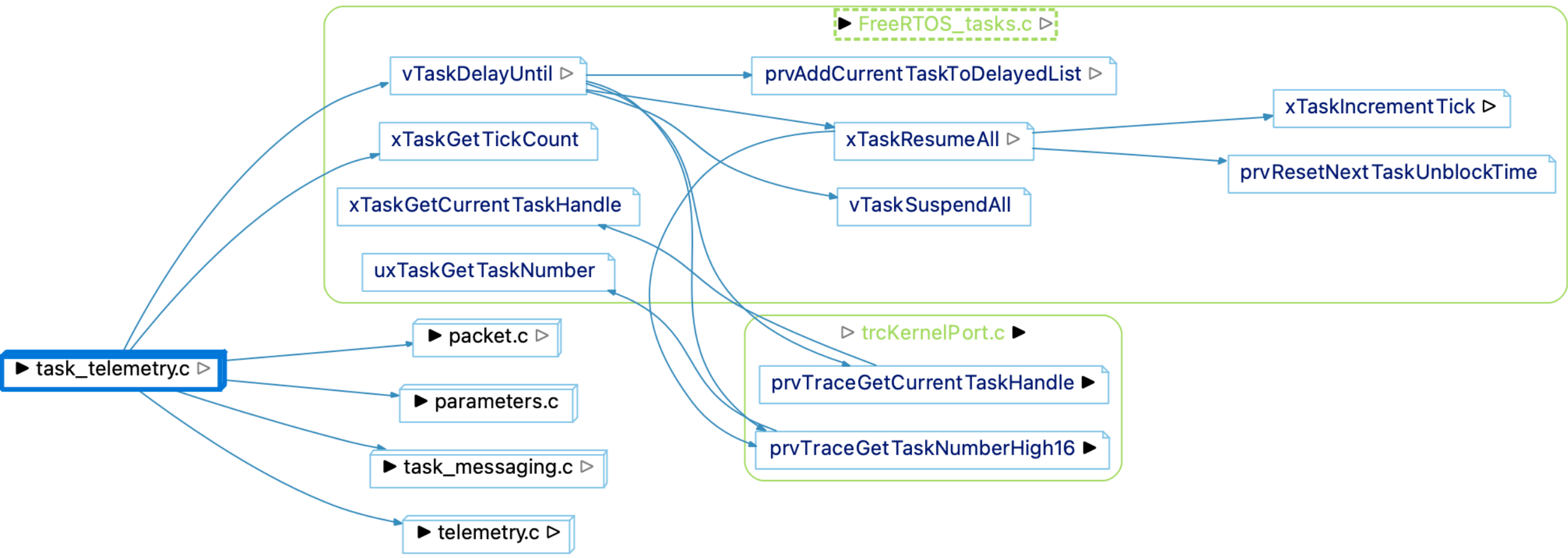
Architectural Analysis is about visualizing and reporting on the status of the implementation versus the architectural design.

- Cohesion
- Coupling
- Module dependencies
- Interfaces
- Technical layering
- etc

An Example – FreeRTOS Kernel



An Example – FreeRTOS Kernel



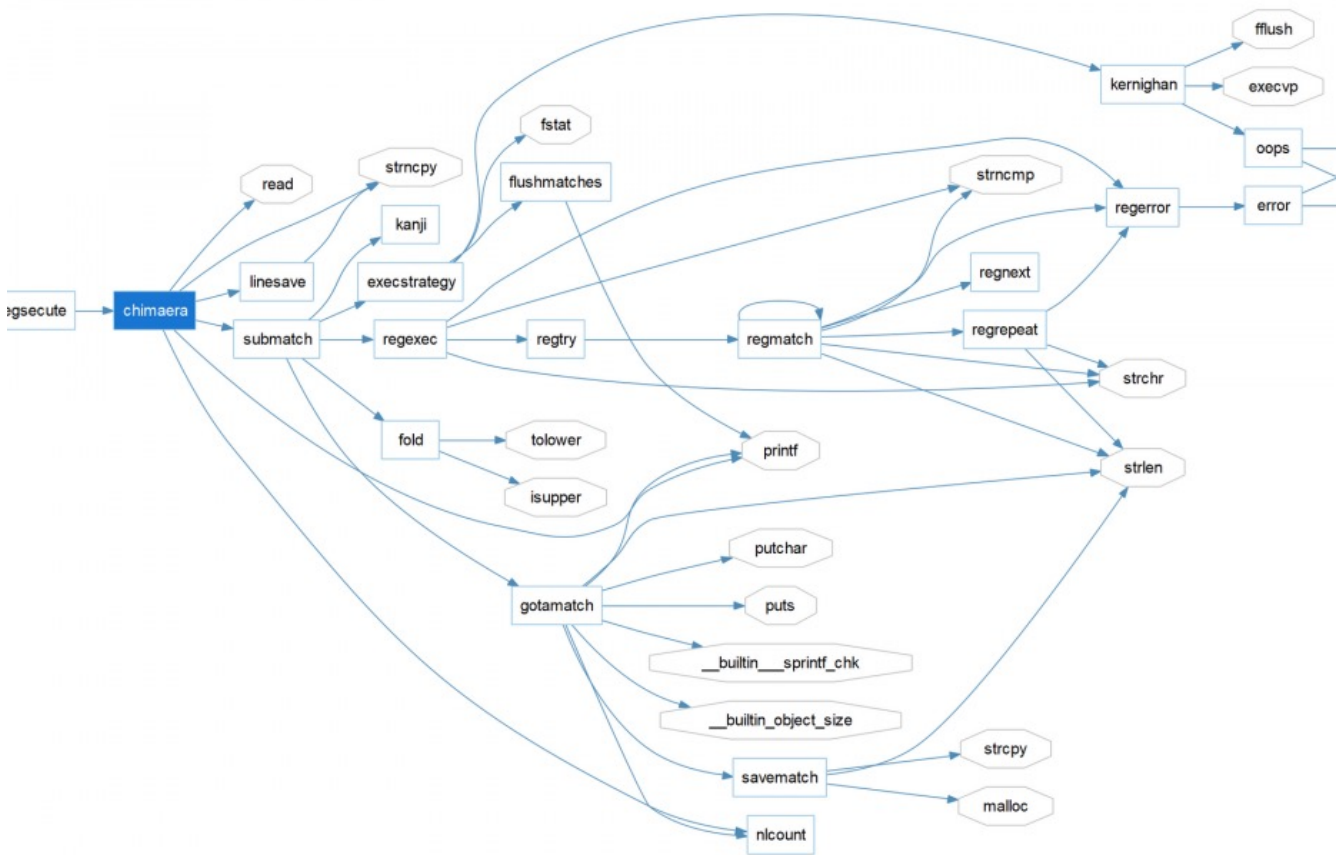
Do you monitor and track how your architecture is implemented?

- Yes
- No

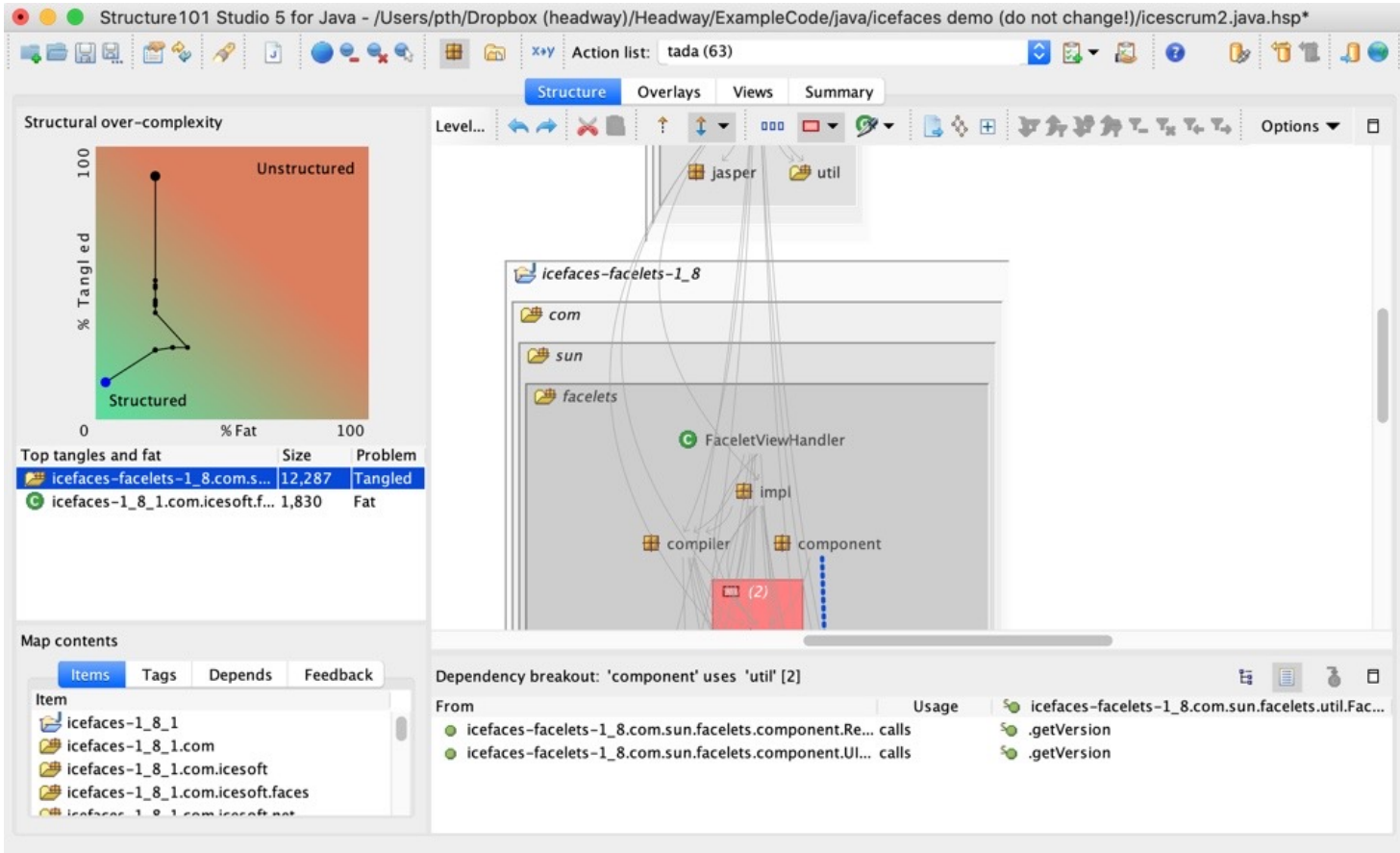
3

Analysis Tools

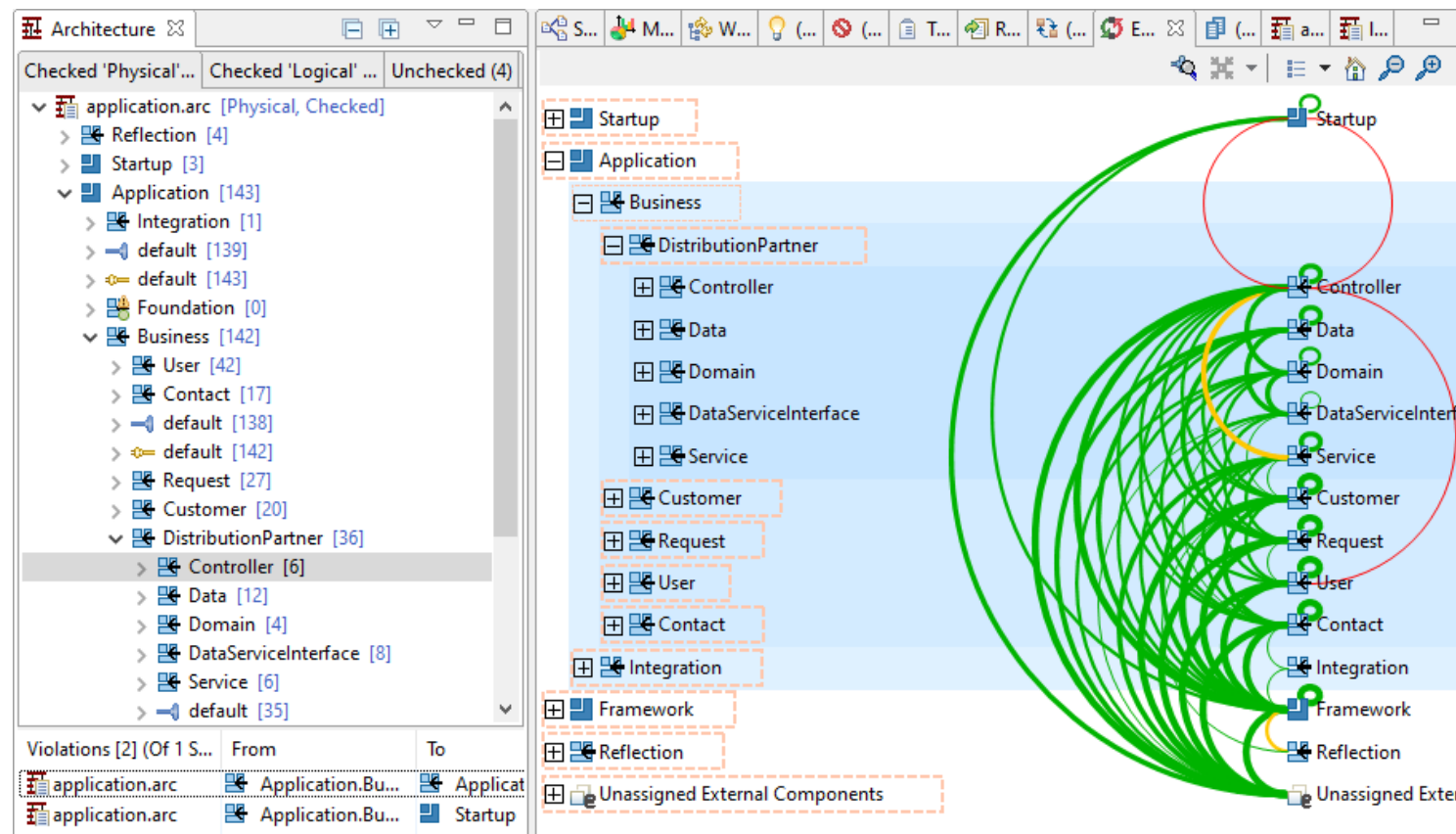
Understand



Structure 101



Sonargraph Architect



What tools do you use to analyze your software architecture?

- Understand
- Structure 101
- Sonargraph Architect
- Other

In the chat, explain other

6 Going Further

Thank you for attending

Please consider the resources below:

- www.beningo.com
 - Blog, White Papers, Courses
 - Embedded Bytes Newsletter
 - <http://bit.ly/1BAHYXm>
 - Embedded Software Design
 - <https://bit.ly/3PZCtNO>



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- Blog > CEC – Embedded Software Design Techniques



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