Architectural Styles

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Deliverable #2 discussion

- Due Monday Feb 11 @ 0800
- Written and oral component
Architectural representations

- Characteristics of representations:
  - Ambiguity: Open to more than one interpretation?
  - Accuracy: Correct within tolerances
  - Precision: Exact but not necessarily correct

- Architectural models can be overwhelming
  - Model individual concerns with unique views
  - Views overlap and can be consistent on inconsistent
Precision & Recall
Statechart diagram

- More formal description of system behaviour.
- Poor mapping between states and components.
Component diagram

- Captures components and relationships.
- Required and provided APIs explicitly recorded.
Deployment diagram

- Provide mapping between physical devices
Sequence diagram

- Focus on inter-component collaboration.
- Capture behaviour for specific scenarios.
Review

Architectural Styles

- Language Based
  - Object-oriented
    - Main program & Subroutines
  - Virtual Machine
    - Batch-sequential

- Layered
  - Client Server
    - Pipe-and-Filter

- Dataflow
  - Batch-sequential

- Peer-to-Peer
  - Implicit Invocation
    - Publish-subscribe

- Interpretation
  - Rule-based
    - Blackboard
  - Mobile code
  - Event-based

[TOPOLOGY FROM TAILOR ET AL.]