SUPA Information Model

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IETF96

Agenda

- **Motivation for building an Information Model**
- **I-D Status and Open Issues**
- **Next Steps**

Motivation (1)

- **Information Model is independent of language, protocol, repository, and content and structure of policy**
- **Without an Information Model…**
  - Resulting data models will be silos, making interoperability difficult
  - Different types of policies (e.g., imperative, procedural, declarative, functional) will themselves be silos
  - Different actors want to author different policies using different grammars
  - No Interoperability with Chef/Puppet/, AWS Cloud Formation Templates, …

Motivation (2)

- **Policies are used by multiple actors**
  - App developers, operators, security and compliance teams, administrators, end-users, … **each has different concepts and terms**
- **Policies exist at different levels of abstraction**
  - Per-port, -device, -network, -VM, -application, -service, …
- **Different Policies exist for different operations on the same device**
  - Monitoring vs. configuration vs. audit
  - Deployment vs. backup vs. provisioning vs. billing vs. retirement …
- **Policies focused on different technologies and vendors must be able to work collaboratively**
  - Requires a **common set of concepts and vocabulary** across domains
  - An E2E policy affects multiple actors, technologies, and vendors
- ***Standardized policies help heterogeneous systems interoperate***

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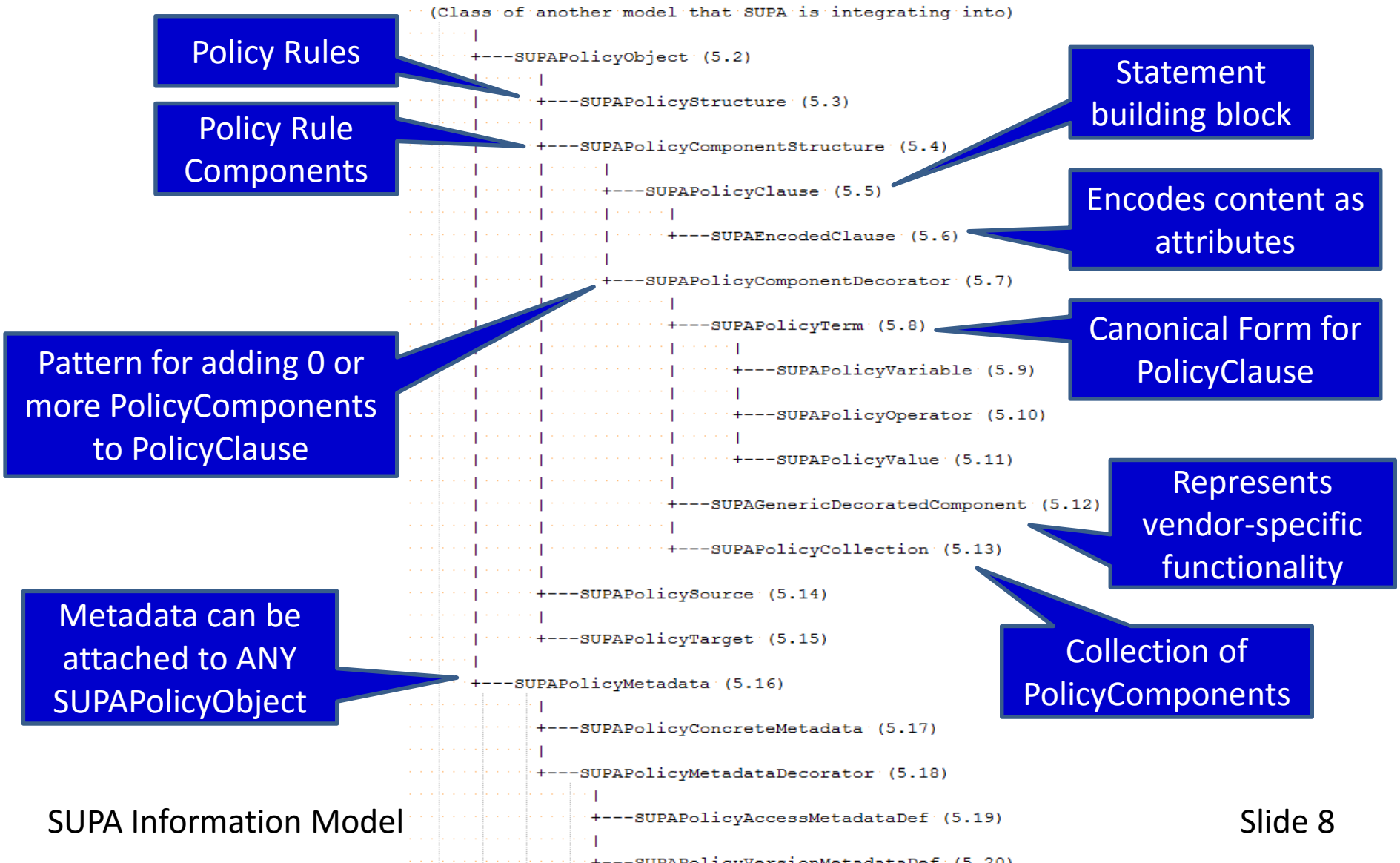
Main Changes from -06 (Individual Draft)

- **Renamed SUPAVendorDecoratedComponent to SUPAGenericDecoratedComponent**
  - Its function was made more generic
- **Clarifications made in response to questions from the SUPA mailing list**
- **Relationship multiplicity has been fine-tuned**
  - Otherwise, class model is stable
- **Produced a **preliminary** YANG model (covered in Joel's presentation)**
- **Various additional typos have been fixed**

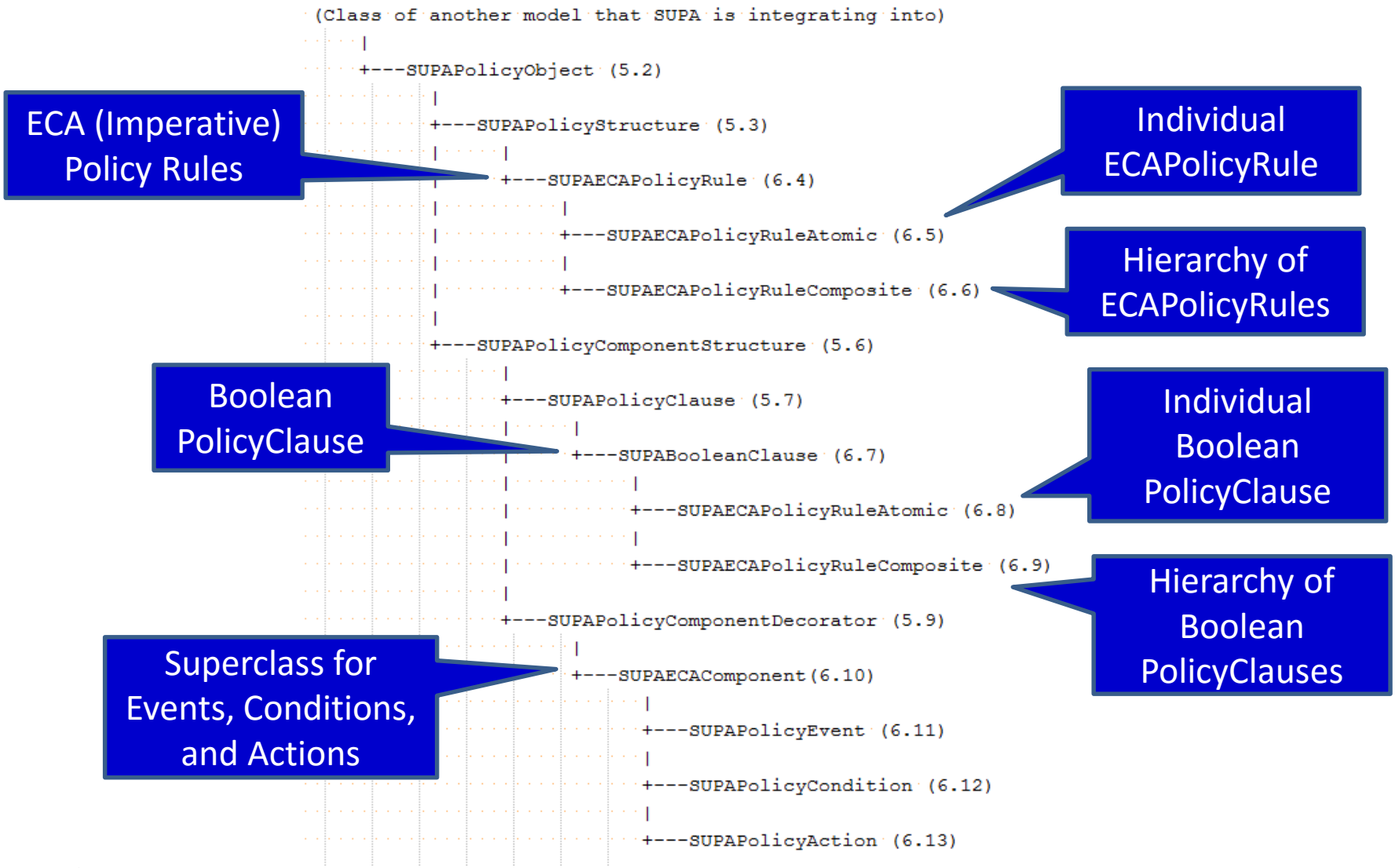
Main Changes from -00 (WG Draft)

- **The Declarative Model Has Ceased To Be**
  - Even removed the Appendices
- **Introduction rewritten and clarified**
- **Redesigned SUPAPolicyVersionMetadataDef**
  - Otherwise, class model is stable
- **Added Fully Qualified Path Names**
- **Various additional typos have been fixed**
- ***Content now stable***

GPIM Class Hierarchy



EPRIM Class Hierarchy



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Next Steps

- **Current Work**
  - Incorporating additional software patterns
  - Working on further optimizations
  - Adding lots of examples

- **Feedback is Always Welcome!**

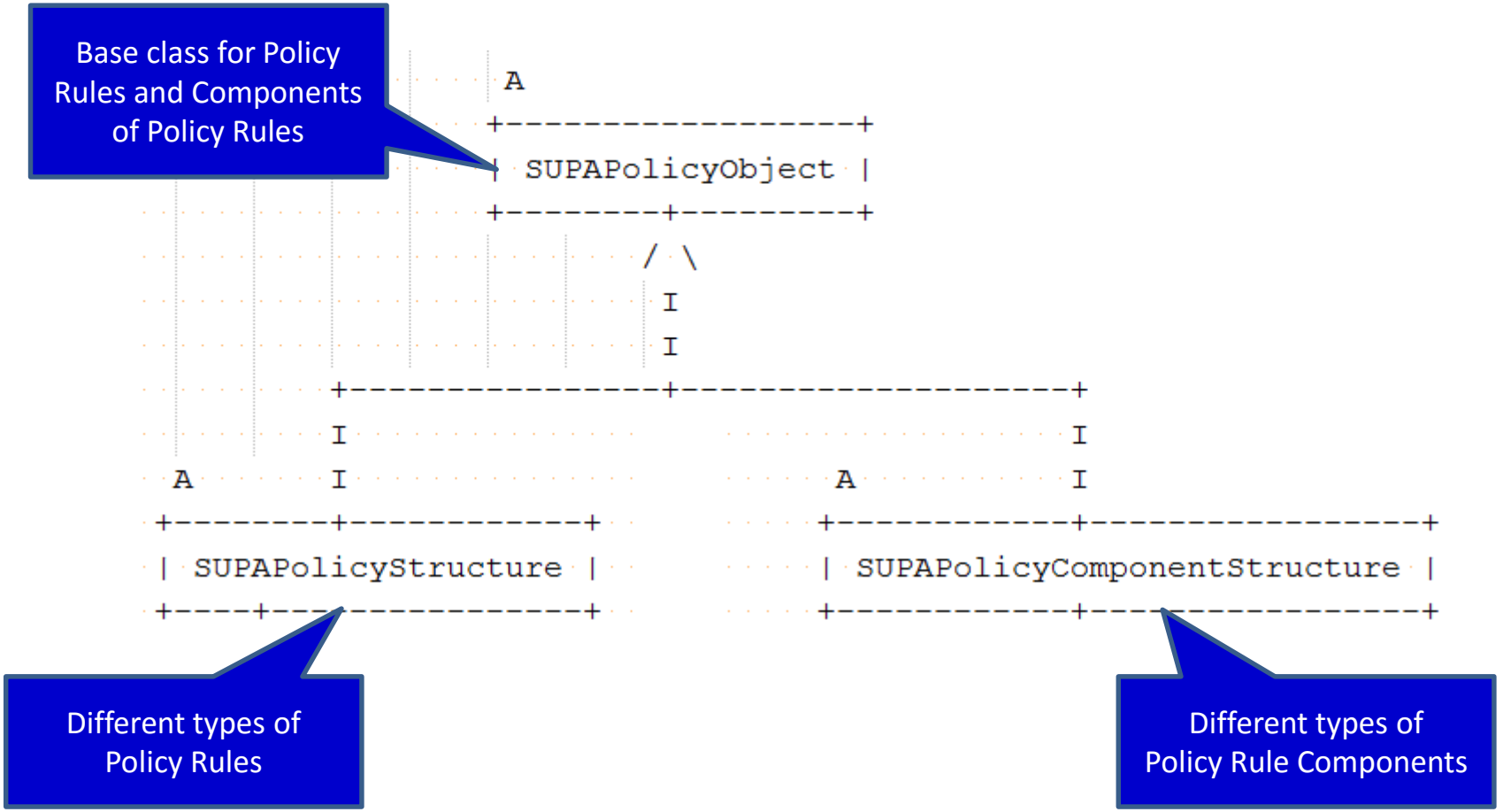
Questions?

"Create like a god. Command like a king. Work like a slave"

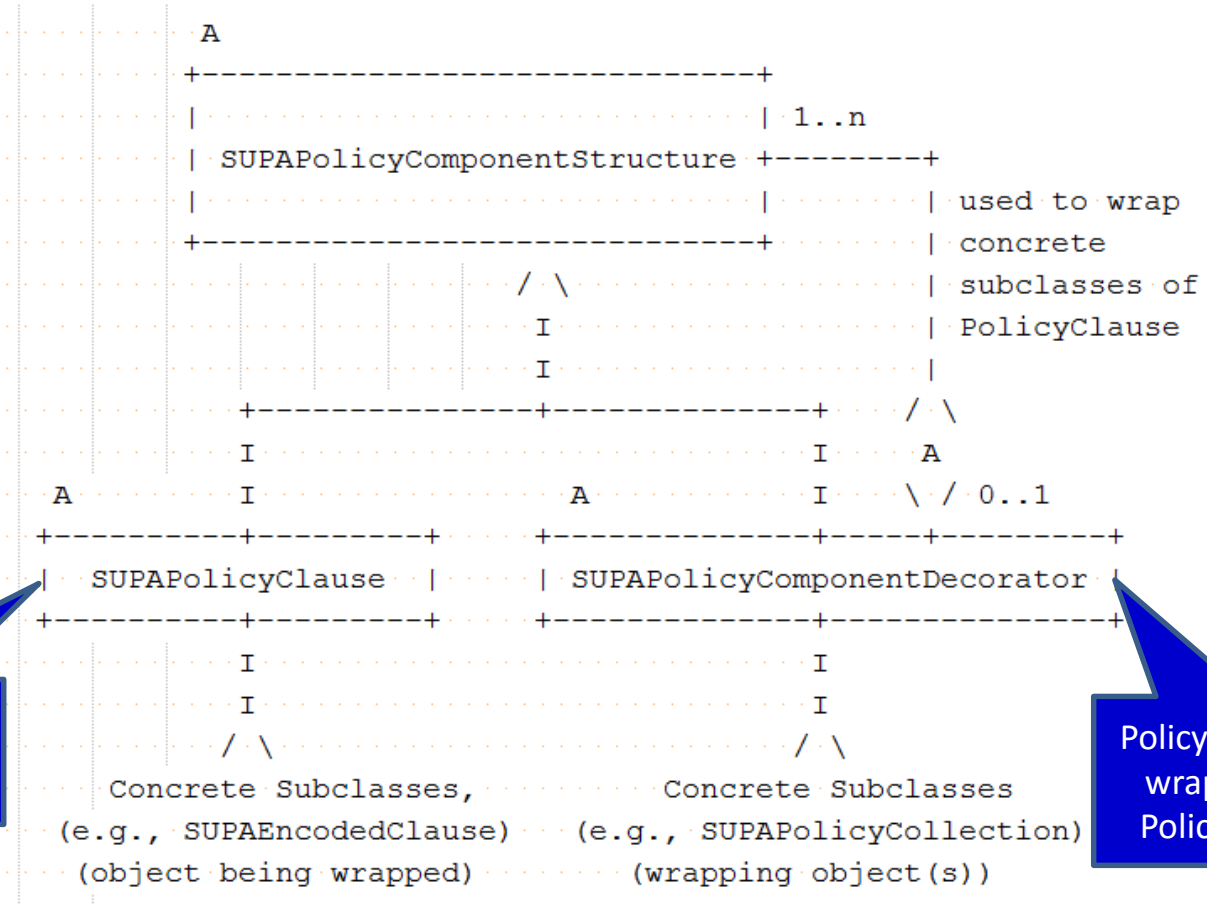
- Constantin Brancusi

SUPA Information Model - Strassner

The GPIM


Base class for Policy Rules and Components of Policy Rules
SUPAPolicyObject
SUPAPolicyStructure
SUPAPolicyComponentStructure
Different types of Policy Rules
Different types of Policy Rule Components

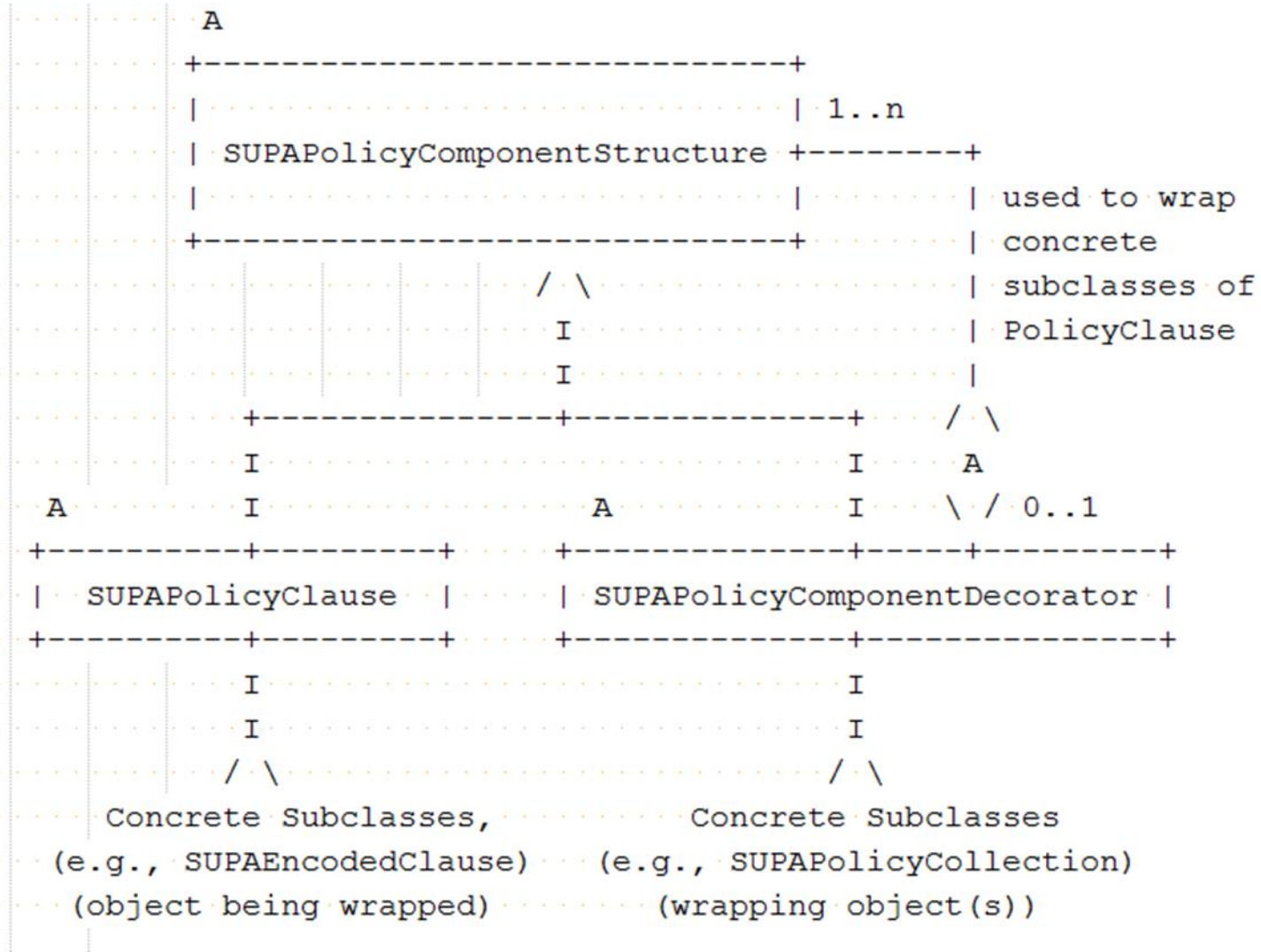
Types of Policy Components



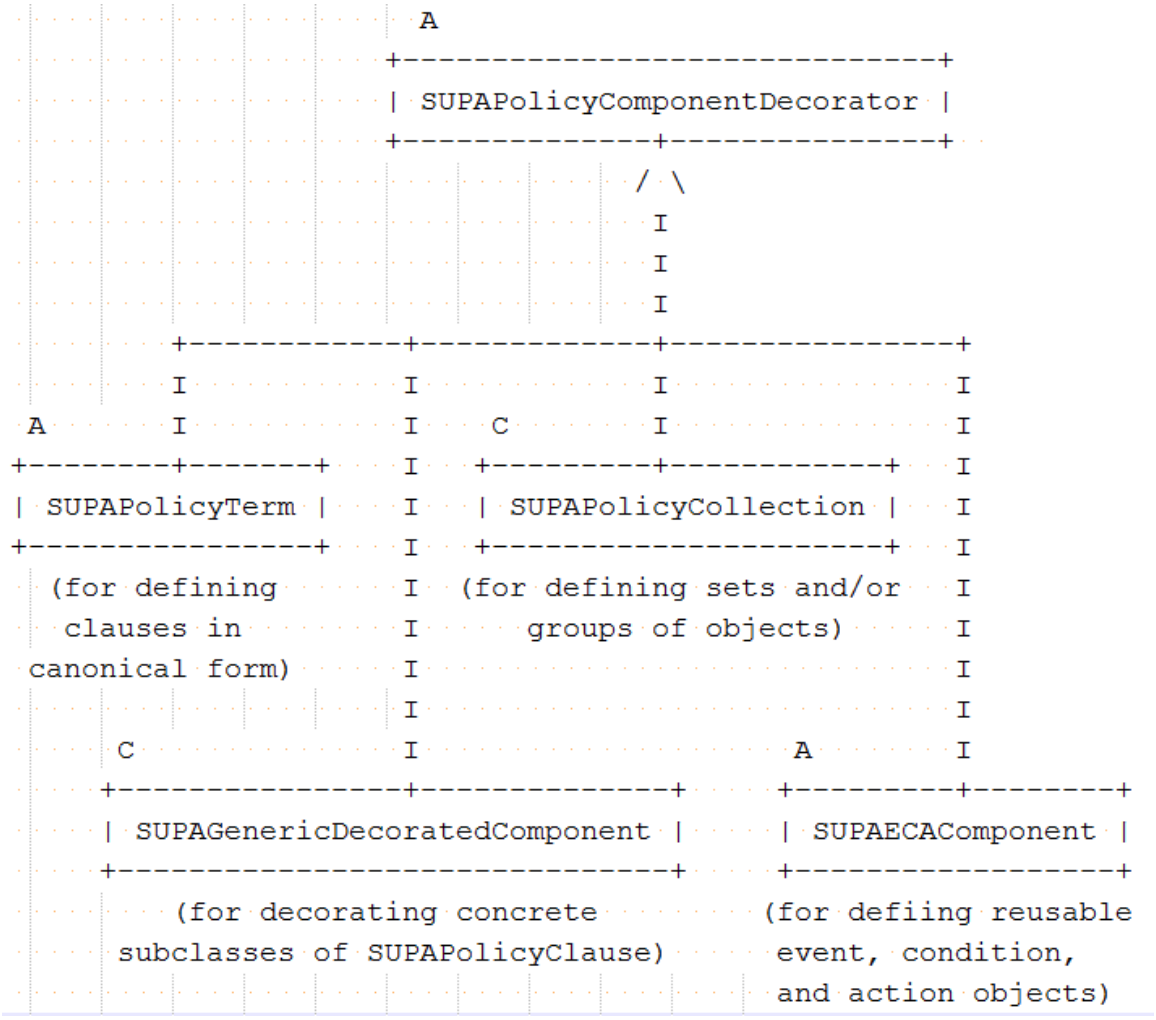
Policies are made up of PolicyClauses

PolicyClauses may be wrapped by other PolicyComponents

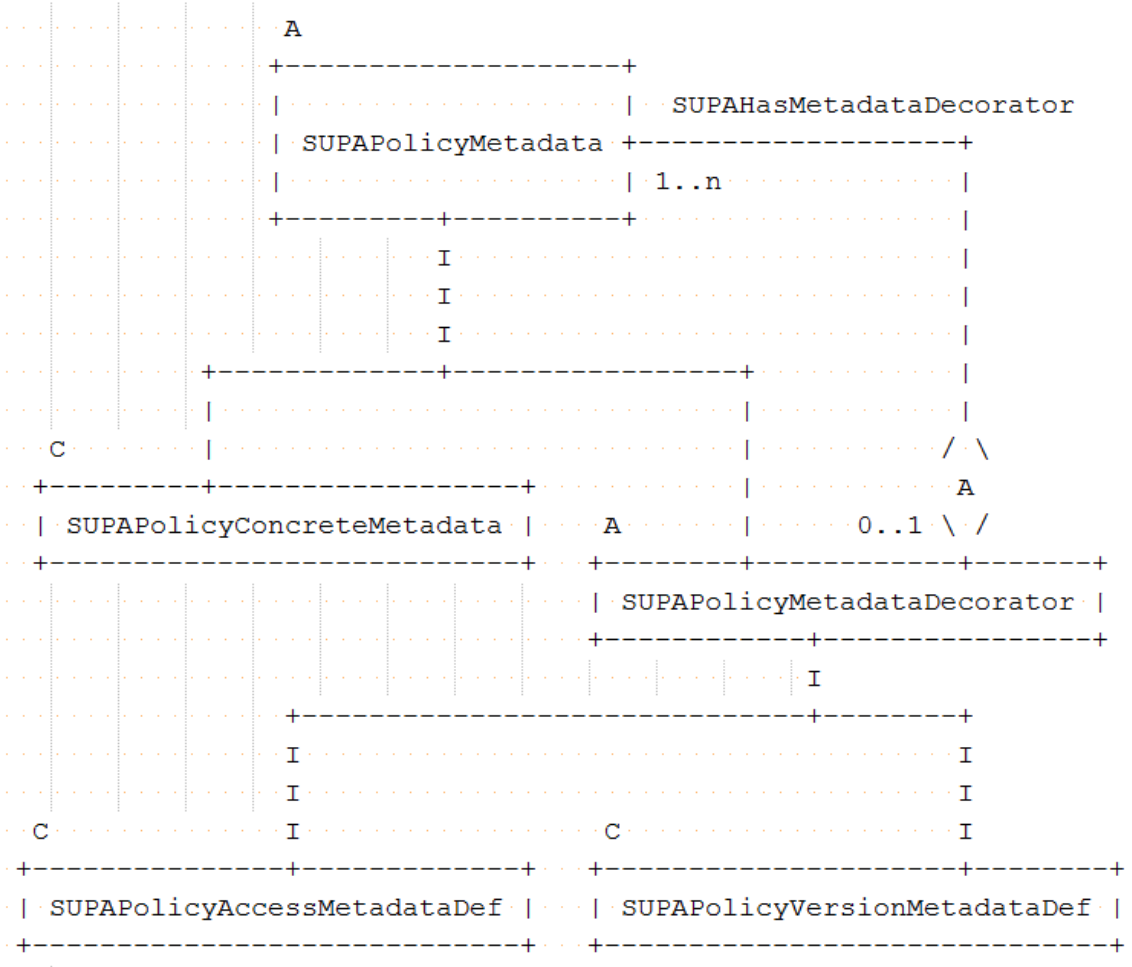
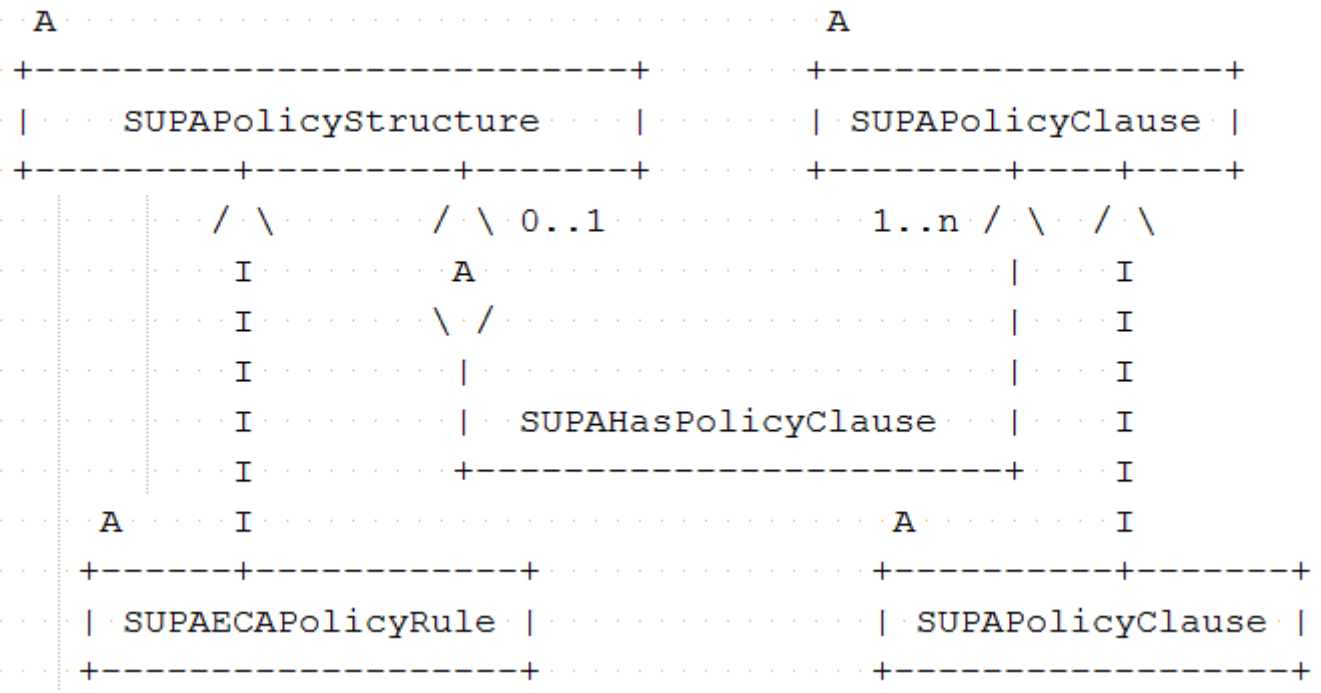
The Decorator Pattern



Decorated Policy Components



Metadata Hierarchy Overview



Constructing ECA Policies