Code Generation with XSD Restrictions & Common Types

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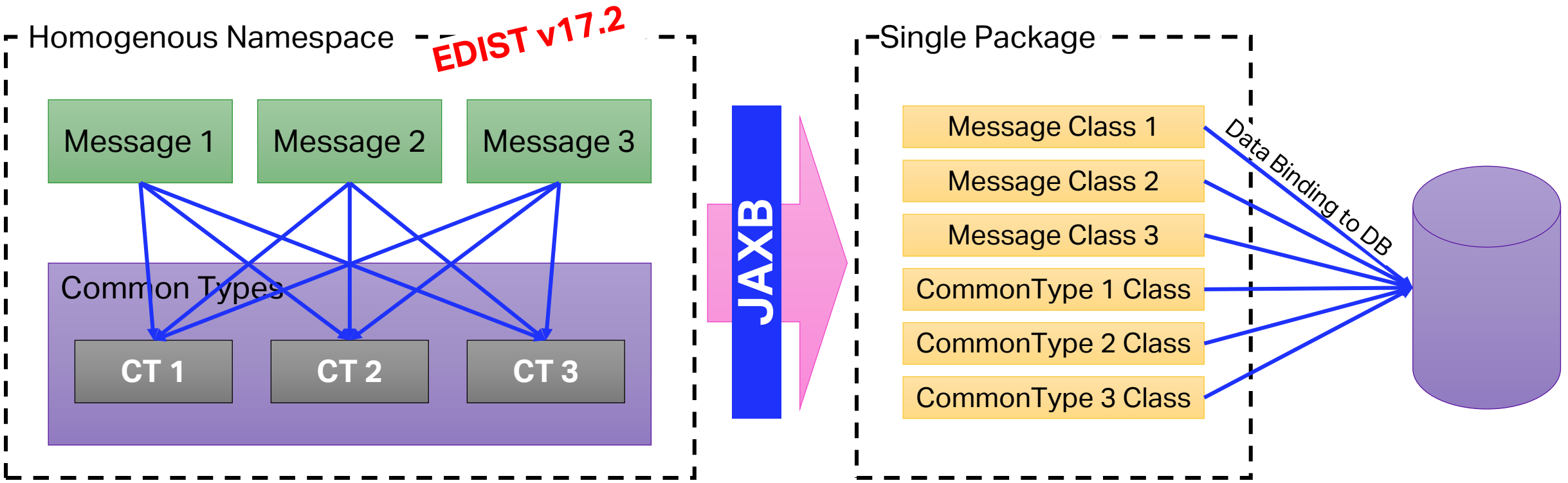
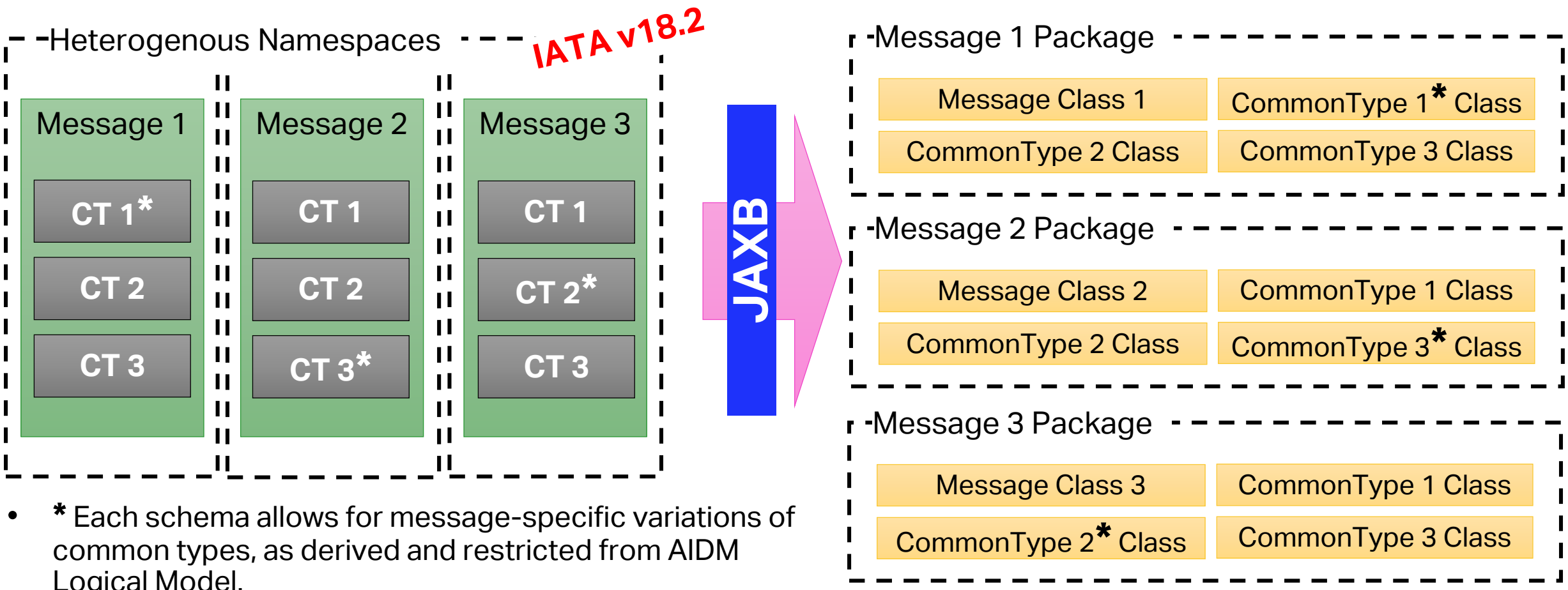
JAXB Code Gen with XSD Common Types



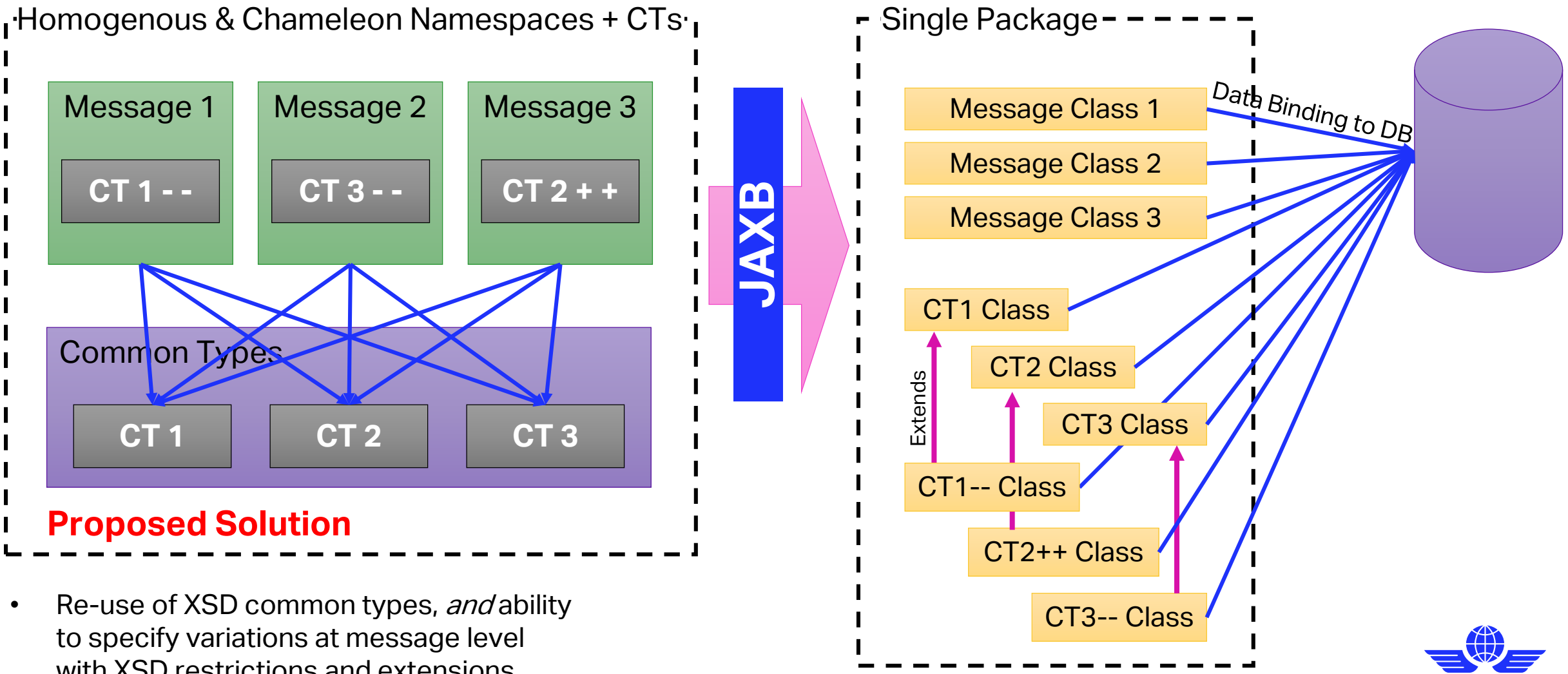
- No duplication of common objects (although no message-specific CT variation).
- Higher rate of re-use and increased consistency (getting used to common data structures).
- Simplified data mapping on persistence layer.

JAXB Code Gen with XSD Lean Schemas



- * Each schema allows for message-specific variations of common types, as derived and restricted from AIDM Logical Model.
- Different namespaces per message (to avoid element name collisions) results in one package per message.
- Repetition of many of the same objects across packages.

JAXB Code Gen with XSD CTs & Restrictions



- Re-use of XSD common types, *and* ability to specify variations at message level with XSD restrictions and extensions.

Next Steps

- Assess ability to generate XSD restrictions from SparxEA
  - May require additional “interim staging area” specific to each standards project.
  - Changes to transformation scripts needed.
- Investigate interim solutions (e.g. repackaging code-generation-friendly release – XML validation would remain the same but internal organization of XSD would implement CTs).
- Test code generation on other platforms (JS, PHP, C# / VB.Net…)
- Consider converging “variant” types to consistent common types wherever possible, reducing footprint of extended classes