

LEISP Exchange Specification (LEXS)

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Waterhole Software

What is LEXS?

- Developed by DOJ/Law Enforcement Information Sharing Program (LEISP)
- Uses and depends on entities and associations defined in NIEM
- Paradigm shift in organizing and structuring IEPD's
 - An *extensible framework* for creating interoperable IEPDs
 - Systems will be able to process and display data in LEXS structured schema *without system modification* (loosely coupled)

The LEXS Schemas

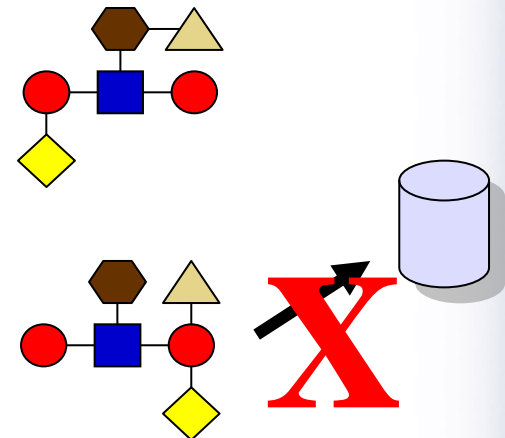
- Publication & Discovery (LEXS-PD)
 - For publishing and updating data from a source to a consumer
 - Is the basis for SAR and N-DEx data submission
- Search & Retrieval (LEXS-SR)
 - For system-to-system federated searches and result drill-downs

Why Should I Care?

- LEXS is the foundation of N-DEx
- LEXS is the foundation of SAR
- Address issues and challenges of interoperability

IEPD Lessons Learned – Consistency

- Two groups *independently* developing IEPDs for the *same purpose* will create *incompatible* IEPDs.
- *Small-scale* interoperability between *coordinating* partners, but not large-scale interoperability between independent community members (i.e., the *ultimate promise of standards*)
- Top-down standards: requires “center of mass”
- Formal standards: long, arduous process



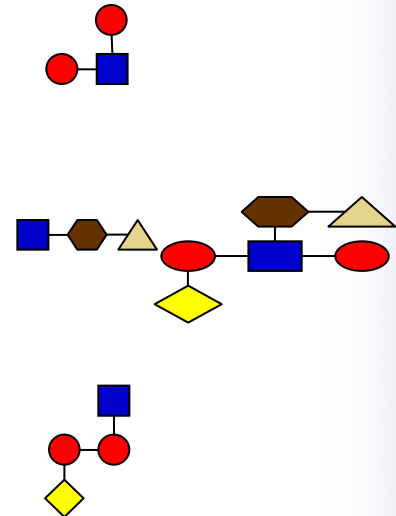
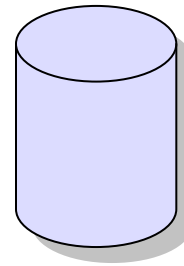
IEPD Lessons Learned – Polyglot Issue

Definition:

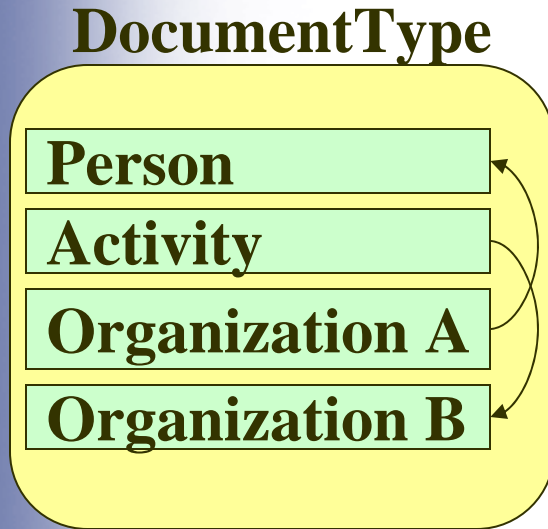
An organization that exchanges data with **multiple partners** must simultaneously support multiple **distinct IEPDs** (must be multi-lingual)

Result:

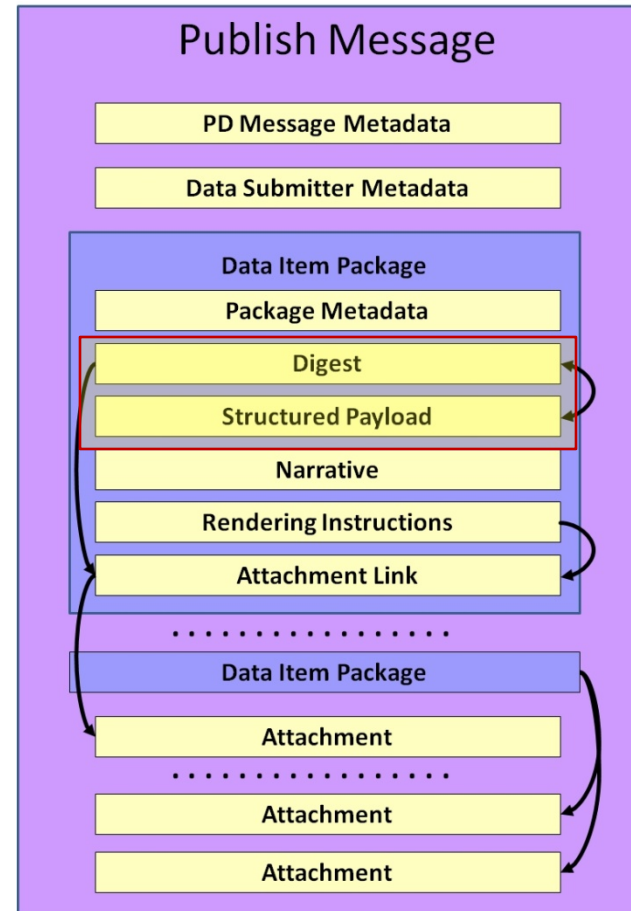
Information sharing is **disjointed** and/or **shallow**



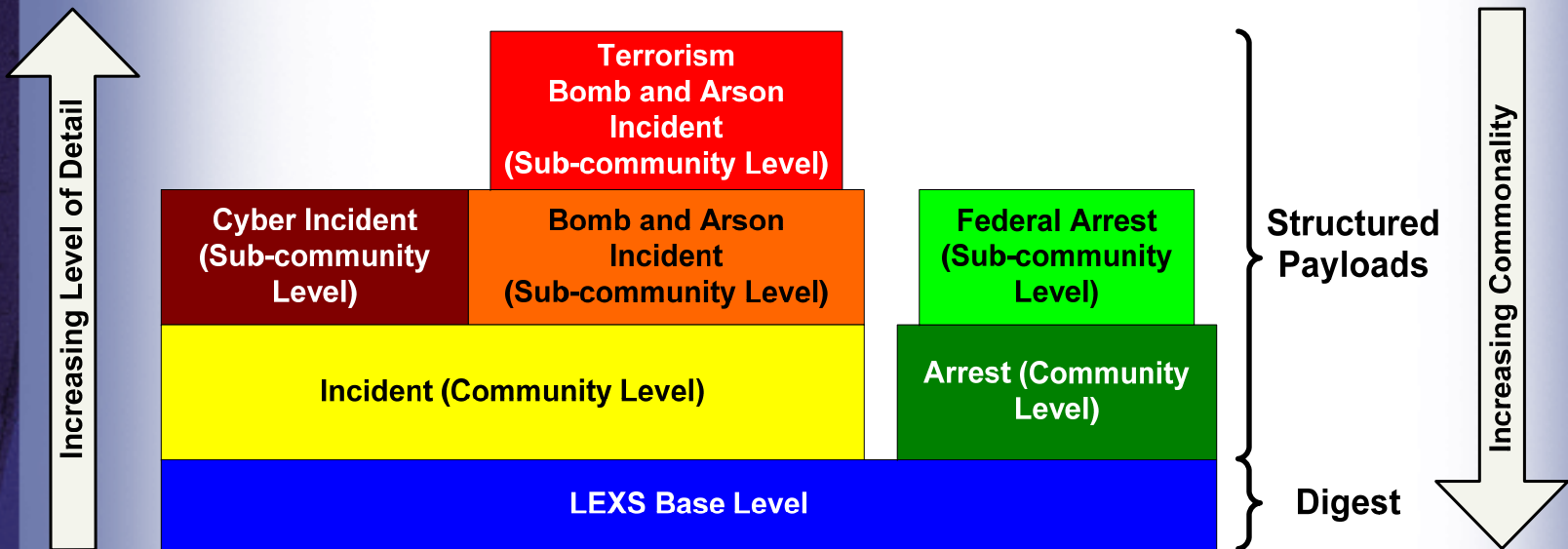
NIEM IEPD



LEXS IEPD



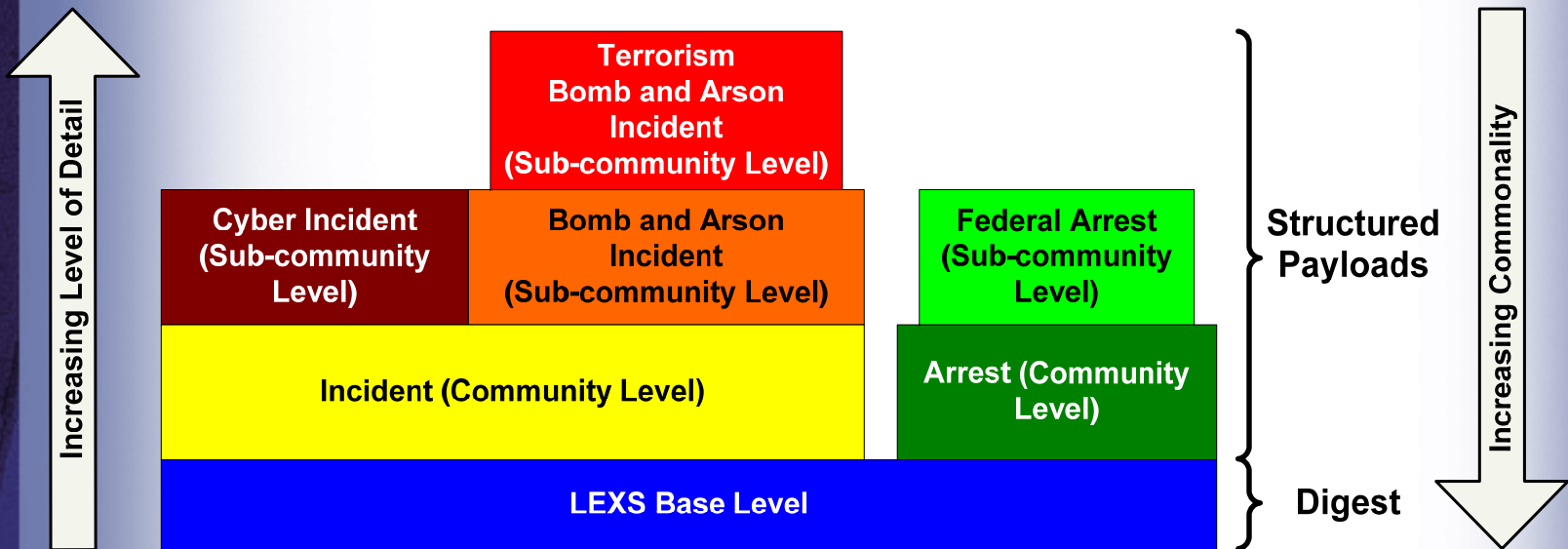
LEXS Solution – Content Layering



LEXS Base Level (Digest)

- Subset of NIEM
- Most commonly used and queried elements and relationships: Person, Location, Activity, Organization, Vehicle
- Content is static and used across all LEXS IEPDs

LEXS Solution – Content Layering



Payload

- Subset of NIEM
- Analogous to the extension schema
- Contains elements that cannot go in the digest
- Multiple options for Persistence

More Information?

- <http://www.it.ojp.gov/iepd/>
- Public Safety IT Magazine May/June 2008
- Aaron Gorrell
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