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Mission:
• Produce a **language for defining structural constraints** on RDF graphs.
• Define **graph topologies** for interface specification, code development, and data verification.

“Do for RDF what XML Schema does for XML.”
Use Cases

- Data ingestion restrictions/definitions.
- Data ingestion validation.
- Generation of user interfaces.
- Potential to lead to significant improvements in the performance of SPARQL engines.
Inputs & Alternatives

- OWL
- SPARQL Inferencing Notation (SPIN)
- Resource Shapes
- Shape Expressions
SPIN

- W3C Member Submission 22 February 2011
  Holger Knublauch, TopQuadrant
  James A. Hendler, RPI
  Kingsley Idehen, OpenLink Software

- “Combines concepts from object oriented languages, query languages, and rule-based systems to **describe object behavior**.”
Resource Shapes

• W3C Member Submission 11 February 2014
  Arthur Ryman, IBM Corporation

• Provides “both a **description** of its expected contents (properties, types) within some operational **context** (e.g. GET, POST) and the **integrity constraints** that must be satisfied by the contents in that context.”
Shape Expressions

• W3C Member Submission 2 June 2014
  Harold Solbrig, Mayo Clinic
  Eric Prud'hommeaux, W3C

• Specifies “formal constraints on the content of RDF graphs and are intended to be used to validate RDF documents, communicate expected graph patterns for interfaces and to generate forms and validation code.”
http://www.w3.org/2013/ShEx/
Data Shapes Working Group

Recommendation Track:
• An RDF vocabulary
• Semantics
• OPTIONAL - Compact, human-readable, non-RDF syntax

Not Recommendation Track:
• Use cases, Primer, test suite, relationships to W3C standards (OWL, SPARQL)
• Just getting started.
• Chair: Arnaud Le Hors, IBM.
• Open to all W3C Members.
• First meeting to be scheduled shortly.
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