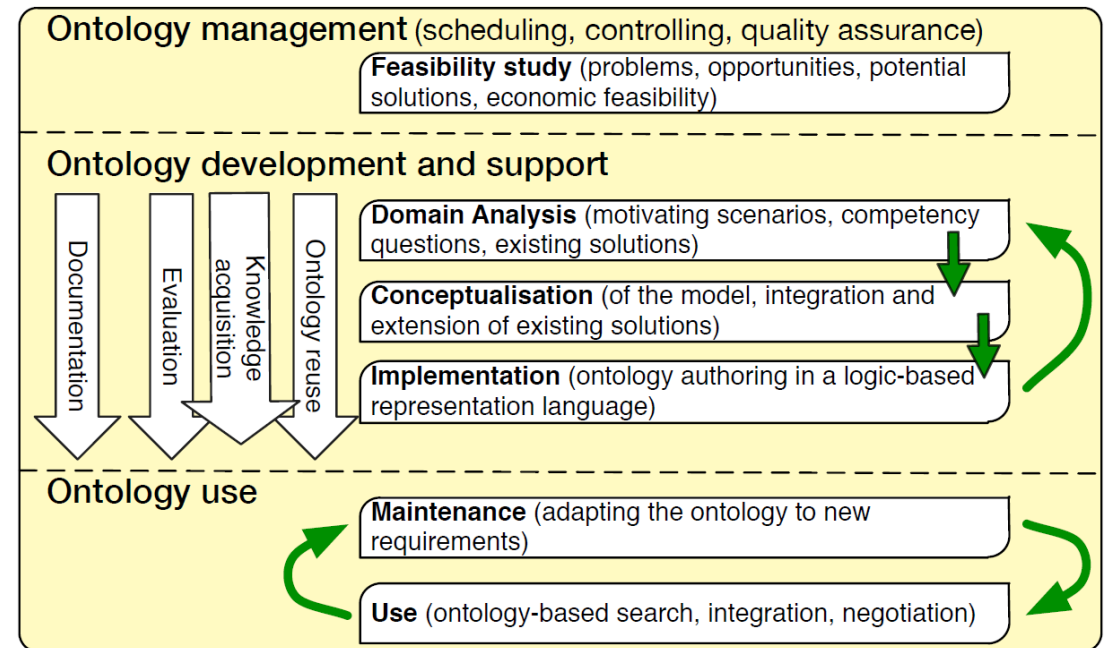# SALI India Extension

Apurv Dube

Extension work

- Iterative process involving:
  - **Domain experts:** *Legal team*
  - **Ontology designers:** *Us*
  - **Users:** *Law firms, government*
- Design work carried out using OWL API in Java.
- Ontology design is tedious and a slow process when done manually.

- Tasks in ontology engineering

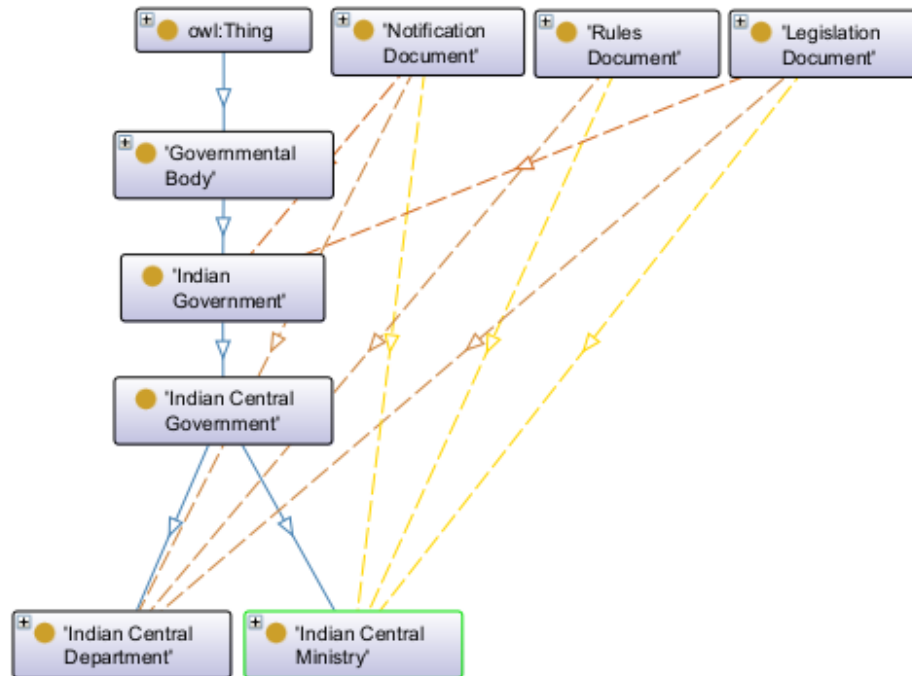# Automating bulk additions to OWL ontology

- **Java code using OWL API** was written for the purpose of making these current and future additions (900+ lines):
- Including a library for
  - Creating class structures
  - Adding object & data properties
  - Adding annotation properties
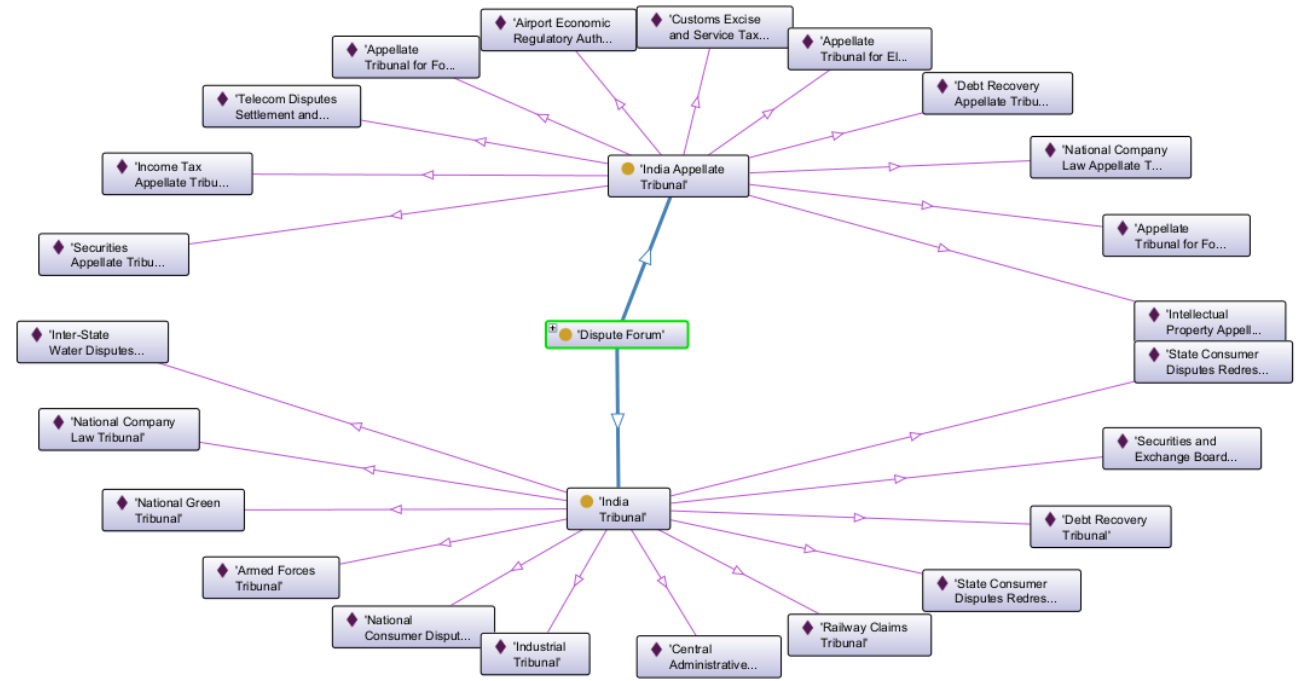 - Asserting basic axioms
  - Searching etc.

Why?

- **Volume of additions** means visual tools like Protégé can't be used.
- Data about **25** high courts and roughly **688** district courts was added.
- **104** Ministries and departments
- **Location data** states, districts, cities for India.

Simple additions: Ministries & Tribunals

**53 Union ministries & 51 Departments**   **Indian tribunals**
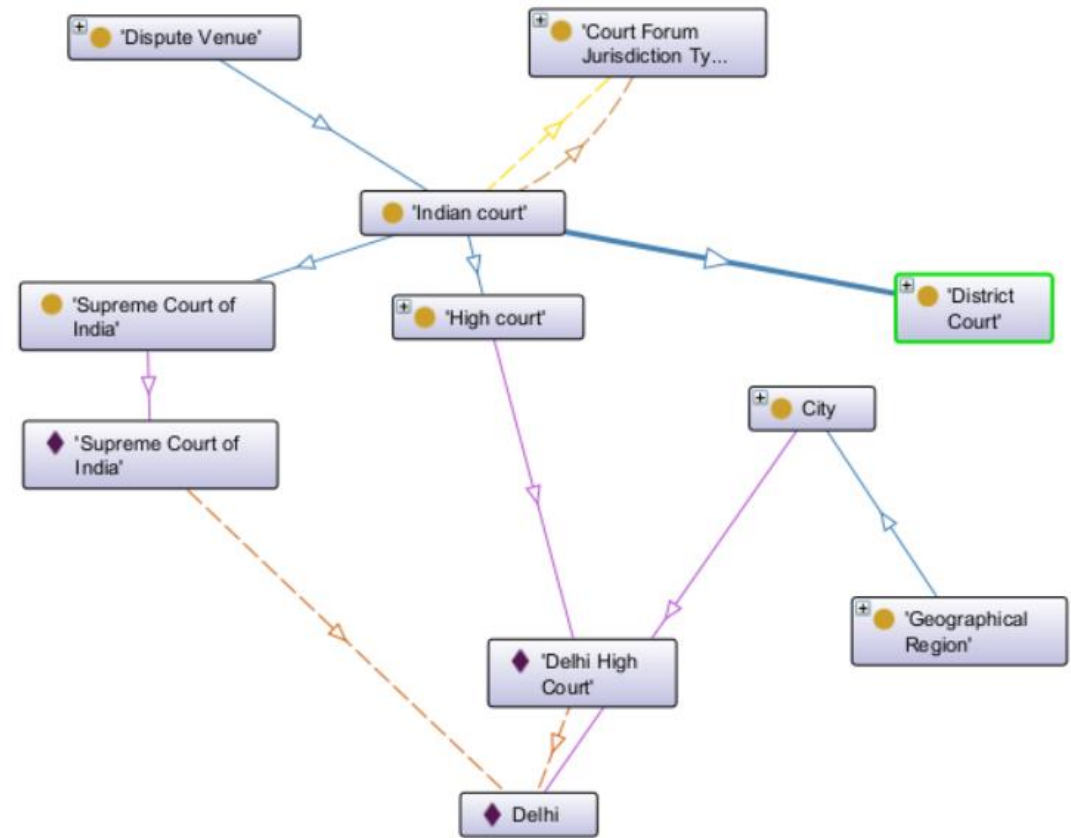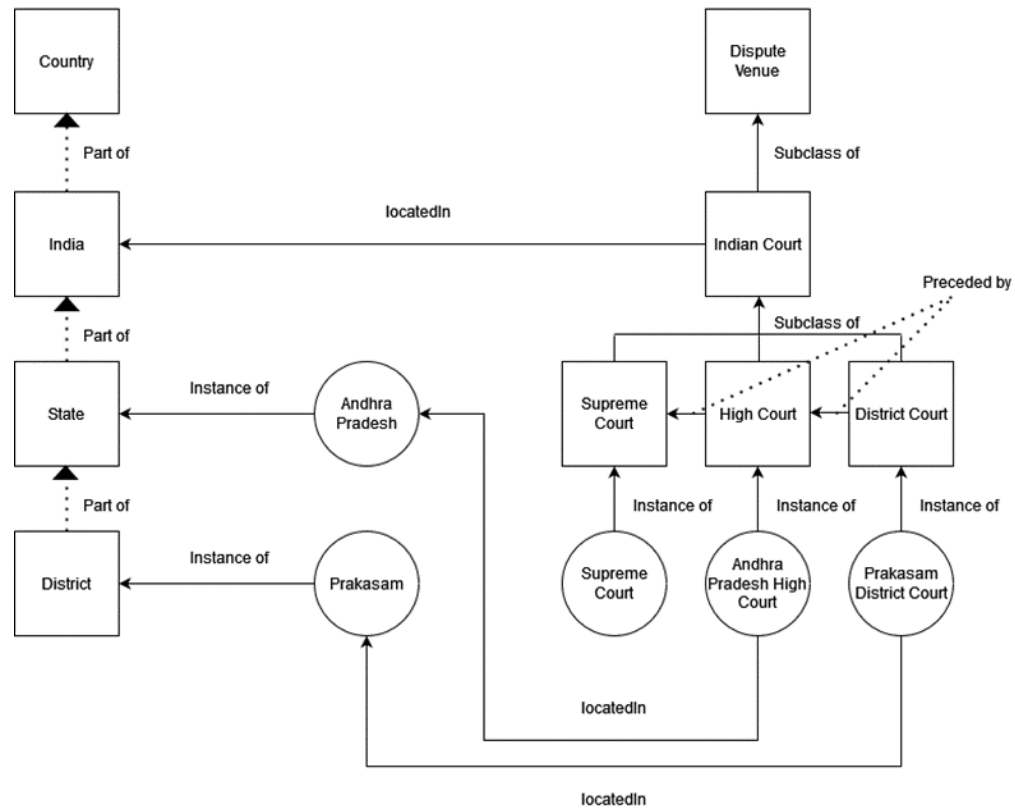
Addition of location data

- SALI has a non-standard method of representing locations. We used our own approach.
- Extracting information from GeoNames web API:
  - Administrative divisions at level 1 (states and union territories)
  - Level 2 (districts)
  - Some cities
- Integrating GeoNames location instances with SALI India.
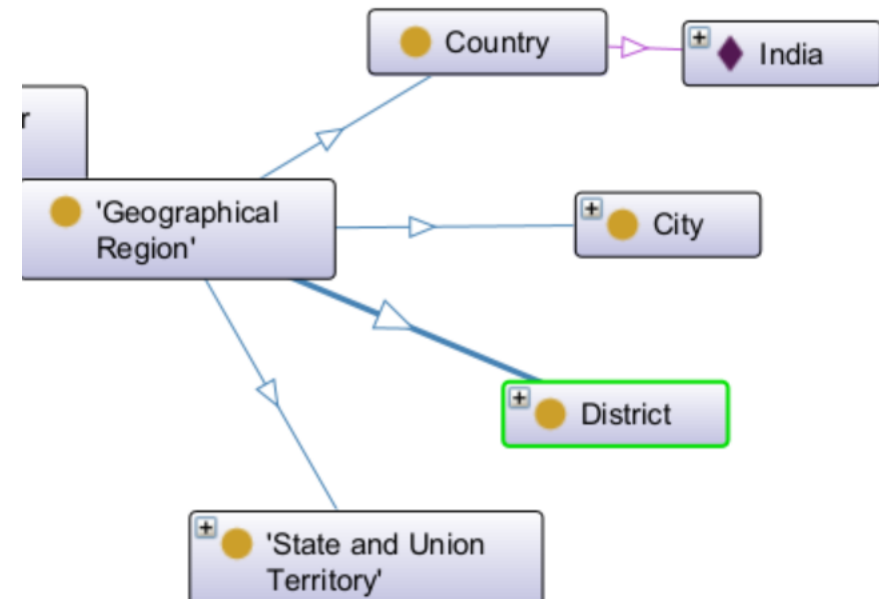
Modelling & addition of courts

Tying up courts to location data

- Indian courts have a different hierarchical structure than the US courts.

- For instance, a District court in a state would be coming under the High court of that state which in turn come under the Supreme court of India.

# Structure of courts & benches: Proposed & partly implemented
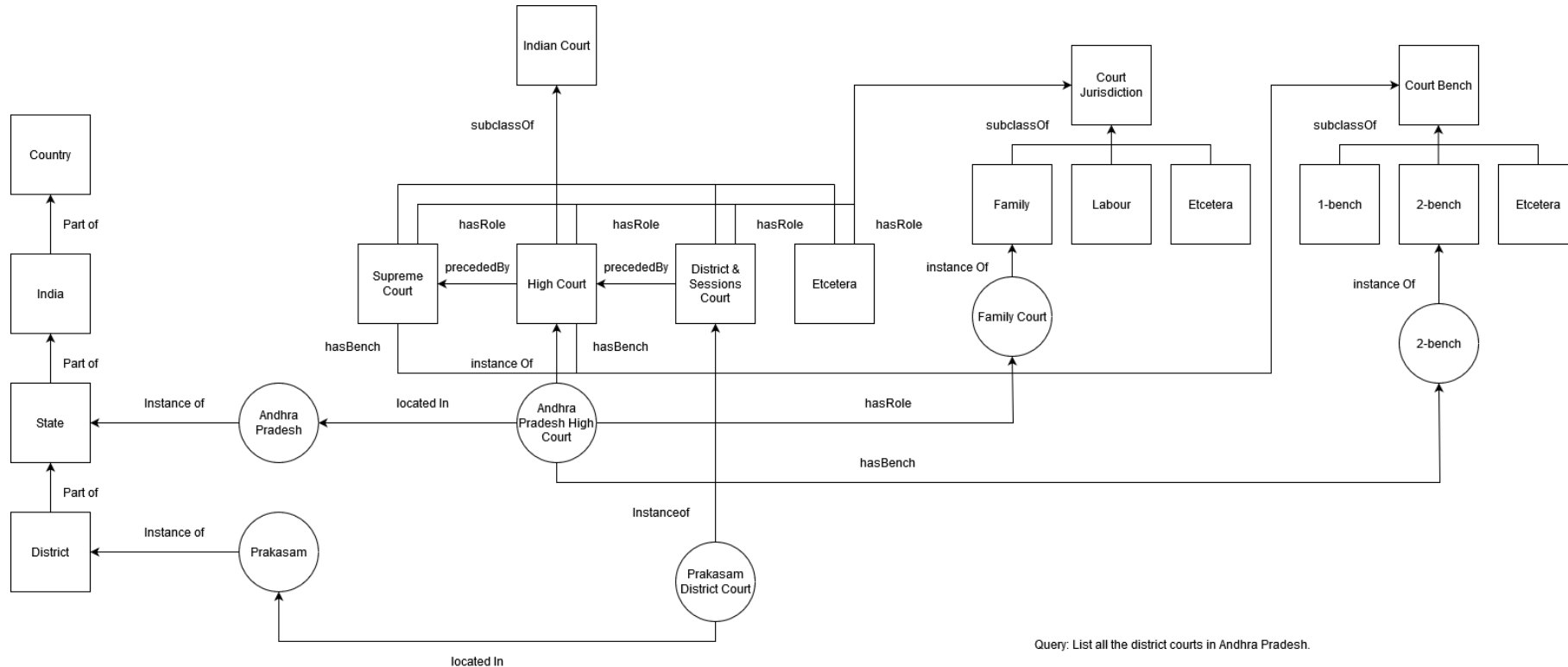
Query: List all the district courts in Andhra Pradesh.

We could simply find all instances under district courts which have a located In property with value which is a district that is a part of Andhra Pradesh.

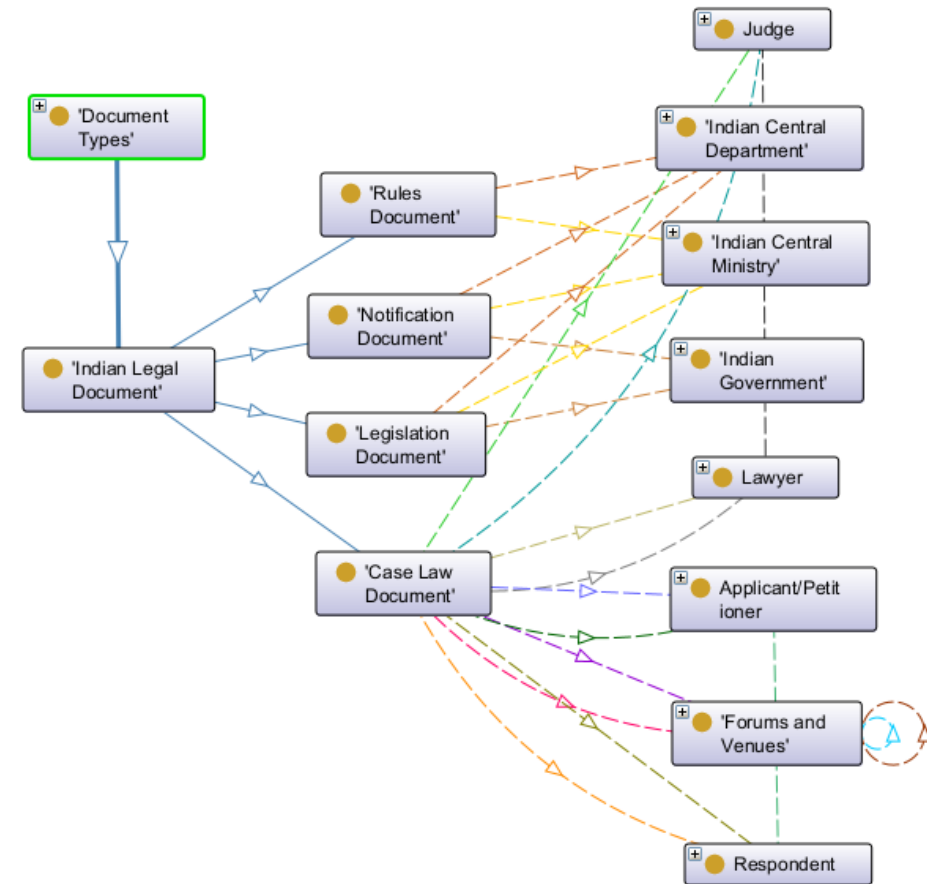Query: How many division benches does the Allahabad High Court have?

We could look at all division benches instances that are associated with Allahabad High Court instance.

# NIA: Check bounce cases (Partial view)
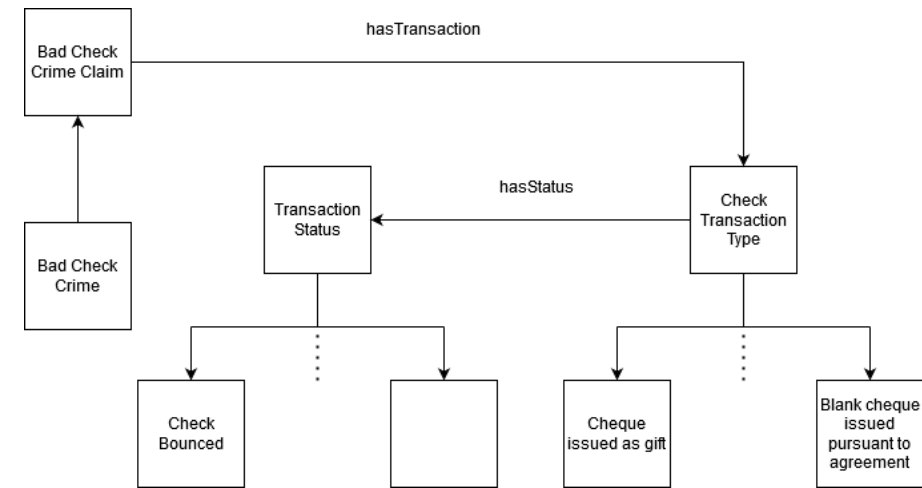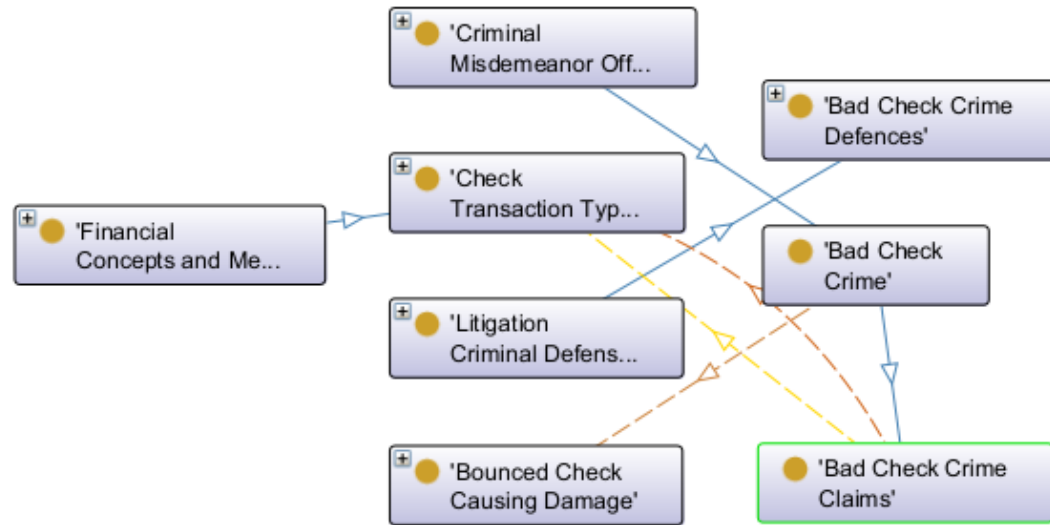
Addition of legal document types

- Four documents types for Indian context.

- They share some object & data properties.

Proposed outline for compliance handling (partial)

- **Legal compliance** is the process by which a company adheres to the complex rules that regulate business practices in a jurisdiction.

Legal compliance is the process by which a company adheres to the complex rules, policies and procedures that regulate business practices in a particular jurisdiction.
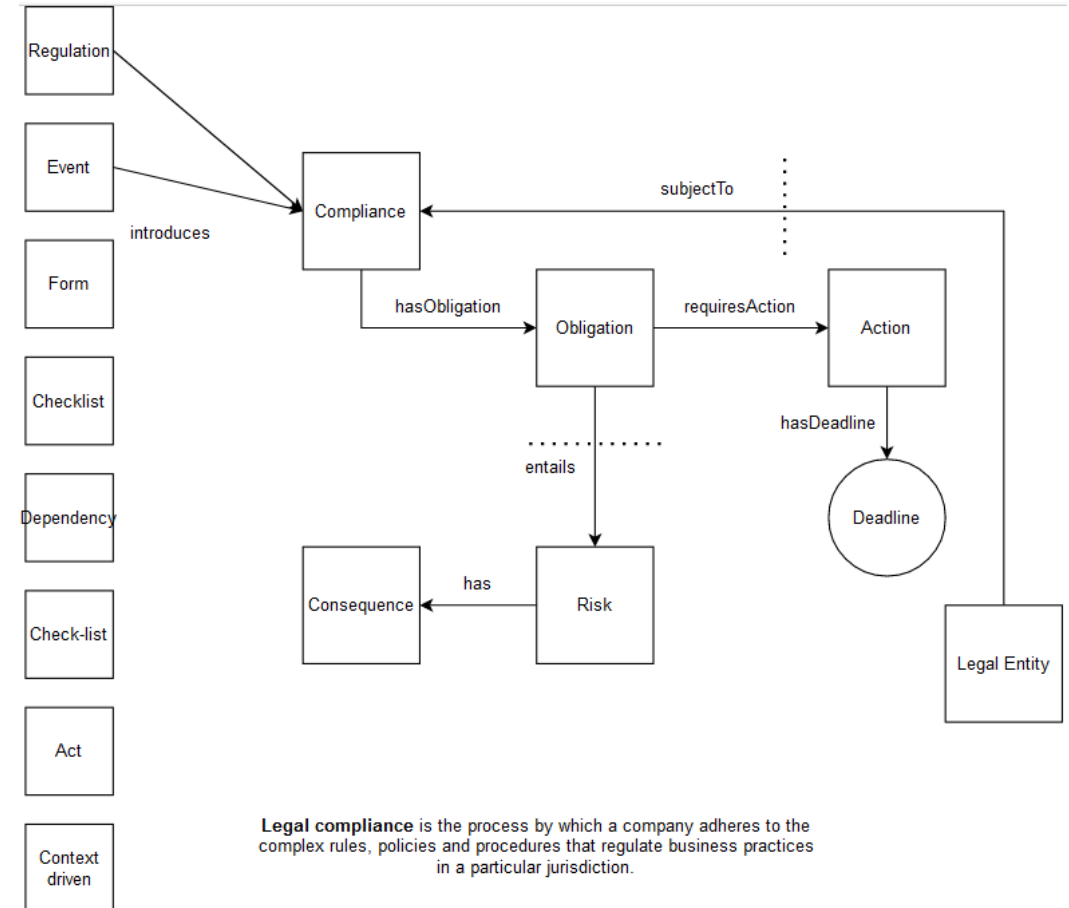
Example additions

- Indian Courts, Tribunals, Ministries & their Departments
  - Creating a hierarchical representation of the court system in India
  - Data about 25 high courts and roughly 688 district courts was added
- Extracting information from GeoNames for administrative divisions at level 1 (states and union territories) and level 2 (districts) and cities.
- Additions for India specific regulations began with the Negotiable Instruments Act.
  - Claims, defenses, rules of evidence etc.
- Current work involves handling compliance information.
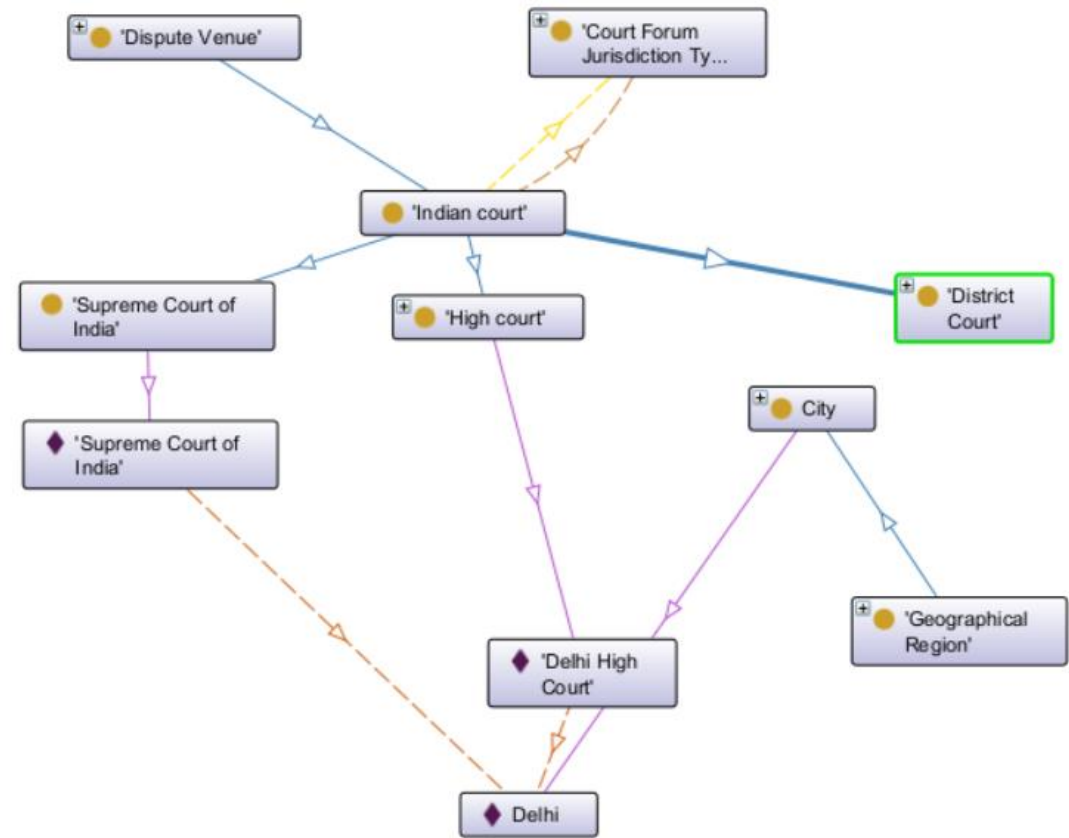
Example additions

Courts

Locations