PODD Ontology Driven Database

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Outline

Scientific experiments

Structured data

PODD Ontology Driven Database

Scientific experiments

Aim to test hypotheses in known, partially controlled situations

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- Contain many variables
- Experiment variables are noted in workbooks

Scientific workbooks

Some common headings

Scientific workbooks

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- Structure can vary

<u>Tables</u>

► Two dimensional structure

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- Suit simple relationships

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- Two dimensional structure
- Suit simple relationships
- ► Single table not ideal for entire experiment

Trees

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- Everything has a common root
- ▶ Branches are independent of each other

▶ Vital metadata about each experiment

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- Each workbook is independent of other workbooks

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- PODD has basic constraints
 - 1. Each ontology must have exactly one Project
 - Each node must be connected to the Project through a series of "part of" links
 - Each node can reference other nodes using "refers_to" links

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- Ontologies can be arbitrarily structured
- PODD has basic constraints
 - 1. Each ontology must have exactly one Project
 - 2. Each node must be connected to the Project through a series of "part of" links
 - Each node can reference other nodes using "refers_to" links
- Ontology defines acceptable structure without imposing a single schema on every workbook

Phenomics ontology structure

