Mini-Lecture Series: System Design Example 2

Collection description (IOP 1.1)

- Starting place (do not put in IOP):
  - A collection of model ships
  - Located in a workshop

- IOP collection description (hypothetical):
  - Name: 19th Century Ironclad Warship Models
  - Location: Ironclad Warship Museum, Houston, TX

Collection description

- Collection purpose:
  - To provide users with a comprehensive list of available models, to provide a historical context for use of the models in historical naval simulations, and to provide a resource for helping simulators choose and acquire appropriate models.

- Formats and size of collection:
  - 1,110 unique miniature models made of balsawood and other materials

- How collection grows:
  - Estate donations and occasional purchases

User group description (IOP 1.2)

- 350 or so naval war gamers
- Generally male
- Generally ages 17 to 79
- Located in U.S., Britain, France, Iceland and Australia

User group description

- Varying levels of general knowledge
- Usually high domain knowledge, but some low
- High system knowledge
- Moderate information seeking knowledge
**Users’ queries (IOP 1.3)**

- I need a list of the ships that fought at the Battle of Memphis so I can re-fight the battle.
- I want a list of models that are available from Peter Pig so I can go look at them.
- What turret ships were in existence in 1868? I’d like to see one or two so I can decide if I want to build one.
- I want a model of the Hartford. Can I compare a resin model to an alloy model?
- I need a list of ships that were in the European theater around 1866. I’d like to see some examples of those ships.
- Which model of the Essex is best? I’d like to look at the model before I purchase that one.

**Attributes of the ships**

*Which attributes are suggested in questions?*

- Name, Type, Displacement
- Armament and Armor
- Nationality, Period, Battles Fought
- Theatre, Length, Width
- Sailplan, Speed, Funnels, Turrets
- Crew, Fate, Notable Features

**Attributes of the models**

*Which attributes are suggested?*

- Material
- Construction
- Manufacturer
- Seller
- Price
- Accuracy
- Reusability

**Choosing attributes to represent**

*How do you decide between attributes of ships vs. attributes of models?*

One approach is to think about . . .

- What users ask and search for, vs.
- What users want to read in complete record display

In either case, **NOT** every descriptive detail

**The attribute Type**

- Major types of ships
  - Monitor
  - Casemate ship
  - Frigate
  - Sloop
  - Corvette
  - Central battery ship
  - Turret ship
  - Other

- Do not use the terms Ironclad or Cruiser; use specific types instead
- Do not use subtypes, such as box battery ship
The attribute Nationality

- Applicable nationalities
  - Union
  - Confederate
  - British
  - French
  - German
  - Danish
  - Austrian
  - Peruvian
  - Chilean

The attribute Accuracy

- High: model matches published drawings, dimensions, sail plan, guns are molded, deckplan correct
- Moderate: model can be distinguished, but dimensions somewhat off, sailplan simplified, no guns shown, etc.
- Poor: model has gross errors in dimensions, features, or poor workmanship
- Total Garbage: model does not resemble historical vessel, or model stinks

Other things to think about

- Use #, R, BL, ML to describe guns, as in 30#MLR for “30-pounder muzzle-loaded rifle”
- Use abbreviations for manufacturers
- Standardize battle names, and drop “battle of,” as in Memphis, Hampton Roads, etc.

The task at hand

If we complete the process for all attributes

THEN we have the basis for metadata elements and record fields.

THEREFORE we have . . .

The accomplishments

. . . designed a metadata scheme

AND

written input rules

AND

defined element and field semantics

AND

represented the subjects!