How far XML enables interoperability?

Farideh Fazayeli
Bryce Olshanski
Group 21
Outline

- Motivation
- An Application
- Limitation of XML
Why XML?

- Classical Models: One true model
- Ecosystem of heterogeneous data and services
- Machine to Machine Communications over Web
  - Different Conceptual Models
  - Using an Intermediate model

- Intermediate model: Implicit One true model
Application

- **XML:**
  - A common data format to allow data-transfer across different application programs
  - Airline and Car rental
Modeling layers

- XML Problem:
  - No appropriate Conceptual Model
  - (Ch 12.1 Semi-structured Data Model)

Figure 12.11, p. 438
Figure 12.13, p. 440
An example of XML
XML vs Bits Debate

• Flexible text format used to create structured documents.

we use XML, which is a widely accepted data format, thus our interface is easy to use.

we use bits, which are a widely accepted data format, thus our interface is easy to use.
• True: On a simplistic technical level!!
• It is essential to understand
  – Assumptions about application-level models
  – Required tools: implicitly designed into interfaces
Exaggerated Claims

- XML: Great Power with Great Responsibility
- XML Fever:
  - Basic Level
    - Parsing Pain, Different Tree Models
  - Intermediate Level
    - Different Environments
  - Advanced Level
    - XML schema defines only syntax (structures)
    - Semantic Web: XML has no semantics!
- Infected by the idea
  - “XML Enables magical universal interoperability of information!!”
Conclusion

• XML: a convenient format for encoding information in an open and easily computable fashion.
• But it is just a format!
• Difficult work of analysis and modeling information has not and will never go away.
References

- Role of XML technology in enabling airlines to garner true additional ancillary revenue.
- Airlines turn to XML to try to fix e-ticket transfer problems, CNN
- Airlines, ATPCo Announce Open Axis XML Standards Group