

Trustworthy Semantic Web Confidentiality, Privacy and Trust

Prof. Bhavani Thuraisingham

The University of Texas at Dallas

February 2010

Outline of the Unit

- What are logic and inference rules
- Why do we need rules?
- Example rules
- Logic programs
- Monotonic and Nonmonotonic rules
- Rule Markup
- Example Rule Markup in XML
- Policy Specification
- Relationship to the Inference and Privacy problems
- Summary and Directions
- Confidentiality, Privacy and Trust

Logic and Inference

- First order predicate logic
- High level language to express knowledge
- Well understood semantics
- Logical consequence - inference
- Proof systems exist
- Sound and complete
- OWL is based on a subset of logic – descriptive logic