Lecture Notes

Course Number: CSC 513
Instructor: Dr. Singh
Lecture Number: 26

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CONCEPTS OF E-BUSINESS; XML TECHNOLOGIES AND CONCEPTS

- IDENTIFY MAIN THEMES (HIGHLIGHTS)
  - ASSUMPTIONS
  - CHALLENGES
  - APPROACHES
  - REMAINING CHALLENGES
CONCEPTS OF E-BUSINESS

OPENNESS

ASSUMPTIONS: CONSISTENCY NOT ALWAYS POSSIBLE

AUTONOMY
HETEROGENEITY
DYNAMISM

CHALLENGE: INTEROPERATING GOOD INTEGRATION

LOOSELY COUPLED
(TIGHTLY COUPLED
CROSS-LINKAGE RELATIONSHIP

APPROACH: EMPHASIZE COMMUNICATION

(DEEMPHASIZE COMMUNICATING PARTIES)

XML

REMAINING CHALLENGES: ACHIEVING ABIDE WITH RIGOR (THEORY)

TOOLS TO SUPPORT ABOVE APPROACHES

ACCOMMODATING CHANGE (IN THE SYSTEM, ESP REQUIREMENTS AND THE ENVIRONMENT IN WHICH IT FUNCTIONS)

ARCHITECTURE (ESP LOOSE COUPLING)

BAD
XML TECHNOLOGIES (AND CONCEPTS)

DOC = TREE

METADATA

NEED FOR STD. (SOME LOW-LEVEL TOPICS AS WELL)

NEED FOR MEANING ("", "")

EXTENSIBILITY (OF VOCABULARIES)

ASSUMPTION: RELEVANT ASPECTS OF MEANING CAN BE ENCODED AS AND DECODED FROM XML DOCS

SYSTEMATIC WAYS TO EXTRACT INFO FROM XML DOCS

TRANSFORM DOCS

XPATH: WALK THROUGH A TREE

QUERY: NOT STAND-ALONE, BUT INCORPORATED (CONSTRUCTS) IN OTHER LANGUAGES

SUPPORTS RECURSION (FUNCTIONAL PROG.)

NO SIDE EFFECTS (IDENTIFIER BUT)

NAMESPACES, URIs,
ARCHITECTURE

- COMPONENTS, CONNECTORS
- PROTOCOLS
- CONSTRAINTS, PATTERNS

OPENNESS ⇒ EMOTIONAL CONNECTIVITY OVER COMPONENTS

IDENTIFYING STAKEHOLDER REQUIREMENTS
MODELING (DECIDING WHAT ARE COMPONENTS; CONNECTORS)

- PATTERNS, STYLES

IDENTIFYING POLICY POINTS

IMPLEMENTED IN AN OPEN SETTING

GOVERNANCE

TECHNICAL ASPECTS OF MODELING: FSM ⇒ STATE DIAGRAM

COMMITMENTS

EXAMPLES WE DISCUSSED
3-7 TIER, ...

REMAINS THE HOW TO MAKE SUITABLE JUDGMENT METHODS ("CORRECT") POLICIES ARE NONTRIVIAL

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WHAT SHOULD I

REDUCE

ARCH EXAMPLES

ARCH

LEAVE UNCHANGED

- QUERY PROJECT

- COMBINED PROJECT (ARCH)

ENHANCE

EXAM PAPERS ...