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The First Workshop on Bidirectional Transformation in Architecture Based Component Composition
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Project Background

• Based on our previous project ...
  – “Dependable XML Processing” (2003–2008) supported by MEXT, Japan
  – Key ideas are ...
    • “Programmable Structured Document”
    • “Bidirectional Transformation for XML”

• Developed ...
  – Bidirectional transformation Language “Bi-X”
  – XML-based Web publishing system “Vu-X”
  – Scripting Bi-X code in XML with “biXfy”
Project Objectives

• Bidirectional transformation so far are ...
  – View-updating in database applications
  – Synchronization of structured data
  – ...

• Explore “Higher reliability with less effort” by Bidirectional transformation in ...
  – Consistent modification of replicated data items
  – Integrity in software development stages
  – ...

Project Subjects

• Bidirectional Programming Languages
  – General purpose bidirectional language “Bi-Haskell”, ...
  – Domain-specific languages for ...

• Development Environment for Bidirectional Programming
  – Libraries, Debuggers, ...

• Bidirectional Formulation of Software Development Processes
  – Architecture Based Component Composition
  – ...

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Introduction of the TransShuttle Project