

# 学术报告

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Title: Converting Relational Database into XML Documents with DOM

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## Abstract

The revolution of XML is recognized as the trend of technology on the Internet to researchers as well as practitioners. Companies need to adopt XML technology. With investment in the current relational database systems, they want to develop new XML documents while running existing relational databases on production. They need to reengineer the relational databases into XML documents with constraints preservation. In the process, schema translation must be done before data conversion. Since the existing relational databases are usually normalized, they have to be reconstructed into XML document tree structures. This can be accomplished through denormalization by joining the normalized relations into tables according to their data dependencies constraints. The joined tables are mapped into DOMs, which are then integrated into XML document trees. The user specifies an XML document root with its relevant nodes to form a partitioned XML document tree to meet their requirements. The selected XML document tree is mapped into an XML schema in the form of DTD. We then load joined tables into DOMs, integrate them into a DOM, and transform it into an XML document.

## Biography

Joseph Fong is an Associate Professor of Computer Science Department at City University of Hong Kong. He graduated with a B.Sc. in Computer Engineering from State University of New York at Buffalo in 1975, a M.S. in Computer Engineering from State University of New York at Stony Brook in 1976, a M.B.A. from Golden Gate University in San Francisco in 1985, and a Ph.D. in Computing at University of Sunderland in UK in 1993. He has 12 years data processing experience in U.S. before he went back to Hong Kong in 1987 to be an academician until now. His main research area is in database and has obtained two Hong Kong patents in Database Reengineering and Interoperability. He is also the founder chairman of Hong Kong Web Society and Sybase Hong Kong User Group, and the Hong Kong Computer Society Database Special Interest Group chairman. He authored a book on "Information Systems Reengineering" with Shi-Ming Huang in 1997 by Springer Verlag. His current research interests are in XML and Web based Learning.

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