

Electronic Commerce: Tutorial

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As we embark on the information age the use of electronic information is spreading through all sectors of society, both nationally and internationally. As a result, commercial organizations, educational institutions and government agencies are finding it essential to be linked by world wide networks, and commercial Internet usage is growing at an accelerating pace.

This tutorial will attempt to provide a broad range of information about electronic commerce, including an overview of the area, key features, example applications and research projects, and current related work that addresses research challenges in the area.

The first part of the tutorial will begin by motivating the subject then present definitions and discussions of related terms and concepts. We will also describe characteristics of electronic commerce such as how content will be stored, accessed, searched for, delivered and secured as well as the requirements for robust electronic commerce and systems.

The second part of this tutorial provides a review of a number of case studies that illustrate Business use of electronic commerce. The purpose of the case studies is to put the technical discussion and challenges into real-life perspectives and discuss lessons learned from such implementations. Examples of such case studies include CyberCash's e-money system used for micropayments called CyberCoin, the Federal Express' e-commerce and the EDI application in Mobil Corporation.

In the final part of the tutorial, we discuss research directions and present current related work in electronic commerce including information integration, match-making and data mining, finding and filtering information, protocols to ensure Interoperability, and the human computer interface which must allow for widespread use.

Dr. Nabil R. Adam is a Professor of Computers & Information Systems and the Director of Rutgers CIMIC at Rutgers University. Dr. Yelena Yesha is a Professor in the Department of Computer Science and Electrical Engineering at the University of Maryland Baltimore County. In addition, since 1994 Dr. Yesha is serving as the Director of the Center of Excellence in Space Data and Information Sciences at NASA. Dr. Adam and Dr. Yesha are co-authors on a forthcoming book "Electronic Commerce: Technical, Business, and Legal Issues" will be published by Prentice Hall.

TARGET AUDIENCE: IT professionals, researchers, and students.

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