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# Money in electronic commerce: digital cash, electronic fund transfer, and Ecash

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# Money in Electronic Commerce:

## *Digital Cash, Electronic Fund Transfer, and Ecash*

*Driven by inherent weaknesses in traditional paper-based payment methods, networked companies and their customers around the world now have at least three pervasive electronic options to move the numbers between their online accounts.*

**T**HE extraordinary growth of international interconnected computer networks and the pervasive trend in commerce of using these networks as a new field for business operations is stimulating demand for new payment methods. These new methods must attain unprecedented levels of security, speed, privacy, decentralization, and internationalization for digital commerce to be accepted by both consumers and businesses. This article analyzes three such electronic payment methods:

- The generic, widely used electronic fund transfer
- The proposals for a digital cash standard
- The real-world technology called Ecash

These methods are examined in terms of the dynamics of transaction clearance; the effects on money supply and the macroeconomy; their classification in terms of money and cash; and the comparative viewpoints of monetary authorities, financial institutions, and consumers. This article does not go into detail on the myriad encryption systems, protocols, algorithms, and other technical matters concerning the new systems. These are all secondary aspects of electronic payment. Electronic pay-



ROBERT NEUBECKER

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## Index Terms

Money in electronic commerce: digital cash, electronic fund transfer, and Ecash

Applied computing

Computer systems organization

Enterprise computing

Embedded and cyber-physical systems

Real-time systems

Information systems

Data management systems

World Wide Web

## Communications of the ACM ▼

Database transaction processing

Internet communications tools

### Recommendations

#### *Law of Electronic Commerce*

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#### *Security of Electronic Money*

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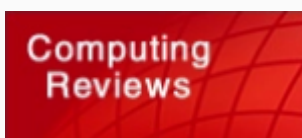
The realisation of electronic commerce process is very difficult without appropriate system for electronic payment. Of course it is possible to use some of the conventional payment instruments (e.g. payment cards, bills, payment orders), but these ...

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### Reviews

Reviewer: Arvid G. Larson

This sextuplet of CACM papers provides an interesting set of commentaries on the contemporary melange of business-related Internet applications. It is often asserted that no one has yet made a dollar from the Internet-enabled electronic marketplace, but these papers do serve as a counterpoint to such grumbling. Clearly, the ubiquitous Internet is slowly emerging as the ... [\(More\)](#)



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