

## David Chaum: bio

David Chaum

Chairperson - Chaum LLC (Surevote)

Stream 3 - technologies that identify, anonymize and authenticate

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### Biography

Dr. Chaum is a world renowned cryptographer, famous for the development of eCash, an electronic cash application that aims to preserve a user's anonymity. He received his Ph.D. in Computer Science, with a minor in Business Administration, from the University of California at Berkeley. He has taught at New York University Graduate School of Business Administration and at the University of California. He built up a cryptography research group at the Center for Mathematics and Computer Science (CWI) in Amsterdam and during this time also founded DigiCash.

At Berkeley, he worked on cryptographic protocols for establishing trust between mutually untrusting parties. Interested in the potential of the Internet from the onset, Chaum began to think about models that would make electronic commerce feasible. What eventually resulted was a new method for making electronic transactions untraceable, Chaum's blind signature protocol. Applied to an online payment transaction, this new protocol assured a bank or merchant that payments were not forged, while also assuring users that information about them and their purchases could not be traced.

In 1993, he left CWI to become CEO of DigiCash, the producer of eCash, which had doubled in size since its founding in 1990 with 12 employees. In 1999, he left DigiCash to concentrate on secure election voting applications. His newest development is SureVote, a voting receipt that can be printed by a modified version of familiar receipt printers. Under Chaum's system, a person selects candidates on a touch-screen terminal and presses "finish" when complete. The machine prints out an anonymous receipt on a double-layer of translucent plastic, which displays the names of candidates the voter selected. If the receipt appears accurate, the voter peels the two layers of plastic apart, and in doing so, the text printed on top of the receipt disappears. This keeps the vote secret. Chaum originally developed SureVote for use in emerging countries where elections are often thrown out after their integrity is called into question. After the November 2000 U.S. Presidential Election, he adopted the approach and founded SureVote.

Read our interview with David Chaum

### Research

.:presentations:.

"Secret-Ballot Receipts: True Voter-Verifiable Elections," presented on May 19, 2004, at the ITL Seminar Series - Secret-Ballot Receipts: True Voter-Verifiable Elections, National Institute of Standards and Technology, Gaithersburg, MD.