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Ari Juels (Ed.)

Financial Cryptography

8th International Conference, FC 2004 Key West, FL, USA, February 9-12, 2004 Revised Papers



Volume Editor

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Preface

The 8th Annual Financial Cryptography Conference was held during 9–12 February 2004 in Key West, Florida, USA. The conference was organized by the International Financial Cryptography Association (IFCA).

The program committee, which comprised 25 members, reviewed 78 submissions, of which only 17 were accepted for presentation at the conference. This year's conference differed somewhat from those of previous years in its consideration of papers devoted to implementation, rather than purely conceptual research; one of these submissions was presented at the conference. This represented a movement in the conference toward practical problems and real-world perspectives as a complement to more traditional academic forms of research.

In this spirit, the program included a number of excellent invited speakers. In the opening talk of the conference, Jack Selby threw down the gauntlet, describing some of the achievements of the PayPal system, but also enumerating reasons for the failures of many elegant e-cash schemes in the past. Ron Rivest, in contrast, described an emerging success in the cleverly conceived Peppercoin micropayment system. Jacques Stern enlightened us with his experience in the cryptographic design of banking cards in France. Simon Pugh unveiled some details of a new generation of wireless credit card. Finally, in deference to the many consumers in the world lacking either techno-savvy or technological resources that we often too easily take for granted, Jon Peha described a fielded banking system that avoids reliance on conventional financial infrastructures. Thanks to all of these speakers for rounding out the conference with their expertise and breadth of vision.

The conference also included a panel, moderated by Andrew Patrick, on usability and its impact on security. This was a salutary and engaging reminder of how security means much more than cryptography alone.

I wish to thank the program committee for their diligence and care in reviewing papers, and in some cases for providing highly detailed comments to submitters. I would also like to thank the external referees who lent help in reviewing papers: Danny Bickson, Liad Blumenreich, Julien Brouchier, Dario Catalano, Benoit Chevallier-Mames, Pierre-Alain Fouque, Zvika Guterman, Helena Handschuh, Stanislaw Jarecki, Ofer Margo, Nick Mathewson, Pascal Paillier, Elan Pavlov, Ludovic Rousseau, Yaron Sella, and Jessica Staddon.

Thanks to the IFCA directors and officers for their guidance in conference arrangements. I am grateful to Moti Yung for chairing the rump session, an evening of short, informal presentations on ideas in the making or the breaking. Thomas Herlea of KU Leuven was very helpful as administrator of the conference submission server. Also thanks to Hinde ten Berge, who served as General Chair, overseeing not only the local arrangements for this conference, but also the publication of the preproceedings. VI Preface

Finally, thanks to all of the contributors of the scientific papers to the conference. As in previous years, participants enjoyed not only mentally stimulating presentations, but also the ample sunshine – a nearly forgotten delight for many delegates from northern countries.

From its beginning, Financial Cryptography has been something of a haven for cryptographic mavericks and a meeting-point for researchers, scientists, financiers, and hands-on implementers. As the conference matures, let us look to see its early spark of originality continue to thrive in the conference hall and on the beaches.

April 2004

Ari Juels

Financial Cryptography 2004

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Ari Juels

RSA Laboratories, USA

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Financial Cryptography 2004 was organized by the International Financial Cryptography Association (IFCA).

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