ASIACCS 2014 Report

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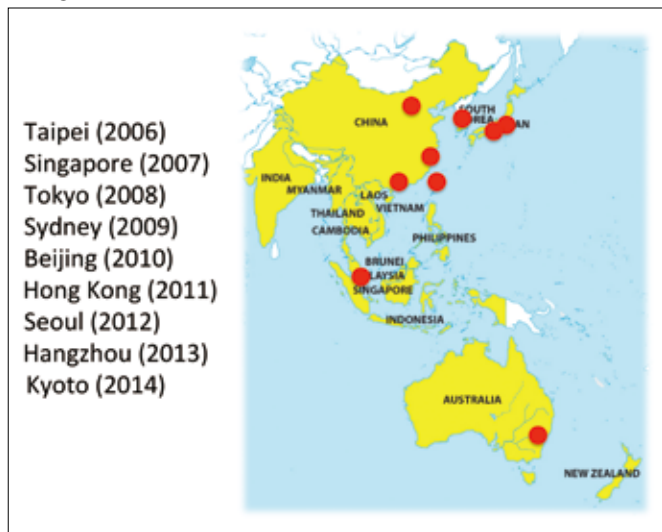Communications Technology

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1. Introduction

The ACM Symposium on Information, Computer and Communications Security (ACM ASIACCS) was first held in the Asia-Oceania region in 2006 as a symposium related to the ACM conference on Computer and Communications Security (ACM CCS). Figure 1 shows the venues where ASIACCS was held from 2006 to 2014. This year, the event was held in Japan for the second time, following the 2008 symposium held in Akihabara, Tokyo. Amid growing awareness of the importance of information security techniques in an increasingly broad range of fields, it is very noteworthy that Japan hosted a top conference covering general information security techniques in addition to cryptography.

2. ASIACCS 2014 overview

This section presents an outline of the ASIACCS 2014 symposium held at the Kyoto Garden Palace hotel on 4–6 June 2014.
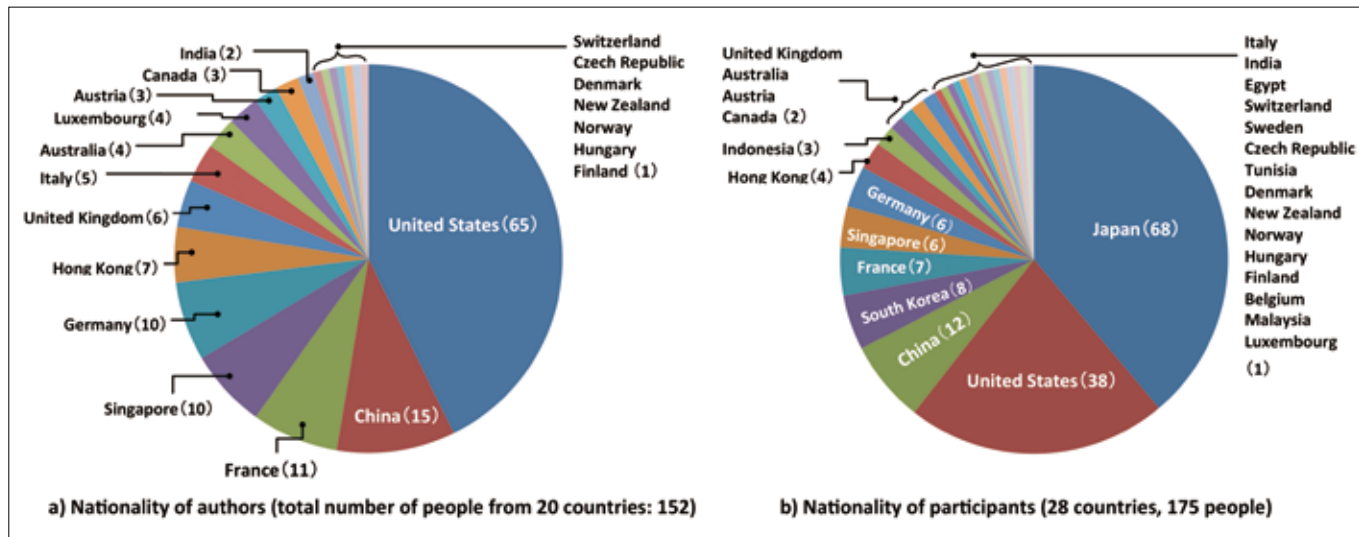
2.1 Selection of papers

There were 255 papers submitted to this symposium. These were reduced to 50 (42 papers and 8 short papers) through a strict peer review process. The presentations were grouped into 12 sessions held over three days: (1) Network, (2) Reputation and Location, (3) Processing encrypted data, (4) Applications 1, (5) Crypto, (6) Access control and Flow analysis, (7) Software and Systems security, (8) Applications 2, (9) Authentication, (10) Android, (11) Short 1 Network, (12) Short 2 Software. The acceptance rate of papers was 16.4%, which is on a par with previous years. Figure 2(a) shows a graphical representation of the nationality of the authors of accepted papers. A new feature at this year's symposium was the addition of 17 poster presentations. These were displayed in the area used for coffee breaks, and were hotly debated with some arguing that they were eating away at the time available for the main sessions.

2.2 Keynote

Professor Christopher Kruegel of the University of

■ **Figure 1: Previous venues of ASIACCS**

Taipei (2006)
Singapore (2007)
Tokyo (2008)
Sydney (2009)
Beijing (2010)
Hong Kong (2011)
Seoul (2012)
Hangzhou (2013)
Kyoto (2014)

■ **Figure 2: Nationalities of (a) authors and (b) participants**

a) Nationality of authors (total number of people from 20 countries: 152)

b) Nationality of participants (28 countries, 175 people)

California, Santa Barbara was invited as the symposium's keynote speaker. In his speech "Fighting Malicious Code — An Eternal Struggle", he commented on the threats of malware exploiting vulnerabilities in mobile devices, and highlighted the dwindling number of research publications in this field despite the growing sophistication and destructiveness of malware. It is clear that more researchers are needed in this field.

■ Photo 1: Geishas performing the Gion Kouta dance

■ Photo 2: Closing remarks by Professor Robert Deng

2.3 Participants

This symposium was attended by 175 people from 28 countries. The graph in Figure 2(b) summarizes the nationality of this year's participants.

3. Co-located Workshops

Five workshops were held on 3 June (the day before the start of ASIACCS 2014): "2014 ACM Asia Public Key Cryptography Workshop (ASIAPKC'14)", "Second international workshop on Security and Forensics in Communication Systems (ASIACCS-SFCS 2014)", "The First International Workshop on Information Hiding and its Criteria for evaluation (IWIHC 2014)", "Asia Workshop on Security, Privacy and Dependability for CyberVehicle (AsiaCyCAR 2014)", and "The 2014 International Workshop on Security in Cloud Computing (SCC'14)". This section introduces the AsiaCyCar 2014 workshop, which was concerned with vehicle security.

3.1 AsiaCyCAR 2014

Due to the increased use of electronics in vehicles and the growth of vehicle services that are connected to networks, protecting people's security and privacy and responding to cyber attacks are becoming issues of pressing importance. These themes were covered by the AsiaCyCAR 2014 workshop, which featured four invited lectures. Professor Tsutomu Matsumoto of Yokohama National University gave a lecture "How to Eliminate Unauthorized CAN Transmission" on the safety of an in-vehicle network called CAN (Control Area Network), and Camille Vuillaume of ETAS introduced the efforts being made in Europe relating to vehicle security in a lecture with the title "Automotive Security Initiatives in Europe". Dennis-Kengo Oka, also of ETAS, gave a speech on "The Trust Assurance Level (TAL) Concept — Towards a Common Security Evaluation Standard for V2X Senders" to introduce the security certification of vehicle-to-vehicle communications, and Mitsuru Matsui of Mitsubishi Electric Corporation gave a speech on "Minimalism of Cryptography on Embedded Devices", in which he described how to implement cryptography on embedded devices for vehicles with restricted memory.

4. Social events

On the evening of June 5, a reception was held to welcome the participants in the symposium and give them a chance to socialize. The reception began with a welcome address and toast from Makoto Imase, Vice President of NICT. Entertainment was provided by two geishas and a performer, who performed a traditional Kyoto dance called the Gion Kouta (Photo 1). During the reception, a prize-giving ceremony was held to confer awards for the best papers and best posters (see section 4.1). These awards were handed over by the program chair with the assistance of the geishas. Finally, Professor Robert Deng (Singapore Management University) brought the reception to a close by announcing the next symposium (ASIACCS 2015, 14–17 April 2015, Singapore). (Photo 2)

5. Awards for best posters and best papers

Two best paper awards and four best poster awards were granted at this symposium.
• Best paper awards (2 papers)
  - A. Das, N. Borisov, P. Mittal, and M. Caesar, "Re^3: Relay Reliability Reputation for Anonymity Systems"
  - M. Miettinen, S. Heuser, W. Kronz, A.-R. Sadeghi, and N. Asokan, "ConXsense — Automated Context Classification for Context-Aware Access Control"
• Best poster awards (4 posters)
  - S. Nakagawa, K. Emura, G. Hanaoka, A. Kodate, T. Nishide, E. Okamoto, and Y. Sakai, "Performance Evaluation of a Privacy-Enhanced Access Log Management Mechanism"
  - D. K. Oka, C. Vuillaume, and T. Furue, "Vehicle ECU Hacking"
  - Y. Suga, "SSL/TLs severs status survey about enabling forward secrecy (+ rapid survey after the Heartbleed Bug)"
  - T. Watanabe and T. Mori, "Understanding consistency between words and actions for Android apps"

6. Conclusion

The ASIACCS international symposium on the security of computers and communications has been held in Asia every year since 2006, and the number of participants has been steadily increasing year on year as the profile of this event grows. For ASIACCS 2014, there were 255 papers submitted, and 175 participants. Both these figures are the highest in the history of ASIACCS.

ASIACCS 2014 was also highly rated by researchers from overseas with regard to conference organizing methods. This is largely due to the contributions made by everyone involved in the symposium. We would especially like to thank Kyushu University, Ritsumeikan University and all those who helped us put the symposium together.