



# **Information Systems Technology Panel**

### Chairman

Prof. Ann MILLER Distinguished Professor of Electrical and Computer Engineering University of Missouri-Rolla 125, Emerson Electric Co. Hall Rolla, MO 65409-0040 UNITED STATES

# **Deputy Chairman**

Prof. Marek AMANOWICZ Military Communication Institute 05-139 Zegrze POLAND

# **TECHNICAL PROGRAMME COMMITTEE**

### Chairman

Dr. Karim Sahnoune DAHEL DRDC Ottawa Network Information Operations Section 3701 Carling Avenue Ottawa, Ontario K1A 0Z4 CANADA

# PANEL EXECUTIVE

# **From Europe:**

RTA-OTAN Lt.Col. P. PRODHOME, FAF IST Panel Executive 7 rue Ancelle, BP 25 F-92201 Neuilly-sur-Seine Cedex FRANCE

#### From the USA or Canada:

RTA-NATO Attention: IST Executive PSC 116 APO AE 09777

Telephone: +33 (1) 5561 2280 / 82 - Telefax: +33 (1) 5561 2298 / 99

# ACKNOWLEDGEMENTS/REMERCIEMENTS

The IST Panel wishes to express its thanks to the Canadian RTB members to RTA for the invitation to hold this Workshop in Ottawa hosted by the Defence Research and Development Canada – Ottawa, and for the facilities and personnel which made the Workshop possible.

Le Panel IST tient à remercier les membres canadiens du RTB auprès de la RTA de leur invitation à tenir cet atelier à Ottawa invités par la Recherche et développement pour la défense Canada – Ottawa, ainsi que pour les installations et le personnel mis à sa disposition.





# Foreword

To acknowledge the increasing importance of new technologies that can enhance the security of information systems, Defence Research and Development Canada (DRDC) hosted a workshop on *Enhancing the security of information systems through biometrics*. This workshop was sponsored by the Information Systems Technology Panel (IST) of the NATO Research and Technology Organisation (RTO) and was held in Ottawa from October 18-20, 2004. Attendance was by invitation only to ensure effective and meaningful interaction.

Following a review of all submissions, thirty-six (36) participants were invited to attend the workshop. They were from France (1), Germany (2), Italy (3), United Kingdom (2), USA (6) and Canada (23). There were 26 technical presentations distributed among Germany (1), Italy (1), United Kingdom (1), USA (5) and Canada (18).

The technical programme was organized into 3 keynote presentations, 5 technical sessions, 1 discussion panel, and 2 breakout sessions. The workshop was augmented by an exhibition on Biometrics hosted by DRDC-Ottawa and the Canadian Defence Industry Association.

The welcoming address was given by Dr. J. Leggat, Chief Executive Officer, DRDC. Dr. M. Vant, Director General DRDC-Ottawa and the Canadian national representative on the IST Panel, presented an overview of the NATO/RTO/IST panel. From the US Department of Defence Biometric Management Office, Mr. J. Woodward delivered his keynote presentation on *Using biometrics in the global war on terrorism*. The second keynote presentation was given by Dr. A.K. Jain, Distinguished Professor at the Michigan State University, and was entitled *Multimodal biometric systems*. In the final keynote presentation, Dr. C. Busch, from the Security Technology Department at Fraunhofer-IGD in Germany, presented the *Challenges for biometrics systems: performance and fake resistance*.

This report consists of presentations made at the workshop along with other relevant material. The workshop dealt with many applications of biometrics, including those in Defence, Homeland Security and Border Control, where security is the primary driver; and those where convenience is the main driver. A common thread in many of the presentations is the impact of biometrics on privacy. The workshop also identifies R&D issues that need to be addressed. We hope that the workshop contributes to getting relevant R&D initiatives started and creating a better understanding and awareness of biometric applications and issues.

Many people helped in preparing and organising the workshop. I would like to thank the workshop committee members: Dr. Q. Xiao (Canada), Dr. S. King (USA), Dr. F. Podio (USA), Lt. Col. Ir. A. Messina, and Prof. G. Foresti (Italy). I am also indebted to K. Keus (Germany) and Dr. S. King for organizing and running the two breakout sessions. Finally, all of this would have never been possible without the tremendous help from the DRDC-Ottawa local organizing committee. Many thanks go to L. Albridge, L. Bell, and D. Forster from the Business Development Office, E. Osei and D. Montreuil from the Network Information Operations Section. Special thanks to Mr. R. Crispin and his staff for providing the decision support system used in the two breakout sessions. On behalf of the programme committee, I would also like to thank the participants for all their contributions to the workshop. Special thanks to the speakers and the chairpersons of the different technical sessions.

I want to acknowledge and thank DRDC management and NATO RTO for their support and commitment.

Finally, I want to express my special thanks to our industry sponsors and exhibitors: Unisys Canada, Bioscrypt Inc., Comnetix Inc., Cross Match Technologies Inc., Diaphonics Inc., Identix Incorporated, Labcal Technologies Inc., Skylink Security, and VisionSphere Technologies Inc.

We hope that participants enjoyed the workshop and that it met their objectives.

Dr. S.K. Dahel Workshop Chairman November 30, 2004