curriculum vitae: dr. dirk husemann

professional career

1996–today	research staff member, project leader, IBM Research, IBM Zurich Research Lab
1995	dr.-ing., computer science (phd), university of erlangen-nuremberg, erlangen, germany
1991–1995	research staff member, university of erlangen-nuremberg, department of computer science iv (operating systems), erlangen, germany
1991	diploma, computer science (master's), university of erlangen-nuremberg, erlangen, germany
1989–1992	german research network's (DFN) internet planning group

awards & honors

2001–today	st andrews university, school of computer science, honorary reader
1993	usenix association lifetime achievement award (contribution to 4.4 BSD unix)

projects

2007–today	VU*gate (generic programming API for virtual world and virtual universe systems)
2003–2007	IBM secure trade lane (worldwide container monitoring to improve supply chain logistics & increase cargo flow security)
2003–today	IBM mobile health toolkit (toolkit for remote patient monitoring & assistance)
2003	secured linux laptop
2002–2003	conditional access for digital audio broadcast (broadcast content protection via public key cryptography)
2002	smart home
2000-2002	service discovery for mobile ad-hoc peer-to-peer networking devices
1997–1999	opencard framework (OCF: java middleware for accessing and interacting with ISO 7816 smart cards, became industry standard)
1996	electronic ticketing (ticket ordering via internet)

patent areas

electronic ticketing, mobile computing, user interfaces, conditional access via DAB, embedded computing, virtual worlds/universes.

expertise

- operating systems — unix (4.4 BSD, application & kernel level), linux (application, kernel & embedded), ecos (ARM7, kernel, application)
- networking and distributed computing — WLAN (802.11), bluetooth, zigbee, mobile phone technology (GSM/GPRS), satellite data communications (Iridium, Inmarsat), digital audio broadcast (DAB), TCP/IP, HTTP, Web Services, Weblogging, Internet Relay Chat, Jabber, SMTP, Firewalls, XMPP
- embedded systems — hardware–software co-design (ARM7), container tracking, power management, eCos
- virtual worlds — libsecondlife, secondlife grids, OpenSim

bibliography

[1] Dirk Husemann and Morton Swimmer. Insecurity and malware in virtual universes. In *Proceedings of the Virus Bulletin International conference 2007*. 2007.

[2] Jonas Thomsen and Dirk Husemann. Evaluating the Use of Motes and TinyOS for a Mobile Sensor Platform. In *IASTED International Conference on Parallel and Distributed Computing and Networks (PDCN)*. IASTED, 2006.

[3] Dirk Husemann and Mike Nidd. Pervasive Patient Monitoring — Take Two at Bedtime. *ERCIM News*, (60), January 2005.

[4] Dirk Husemann. Remote Monitoring of Health Conditions. *ERCIM News*, (56), January 2004.

[5] Dirk Husemann, Chandrasekhar Narayanaswami, and Michael Nidd. Personal Mobile Hub. In *8th International Symposium on Wearable Computers (ISWC 2004), 31 October - 3 November 2004, Arlington, VA, USA*, 85–91. IEEE Computer Society, 2004. ISBN 0-7695-2186-X.

[6] Dirk Husemann and Mike Nidd. DAB CA-PK: Conditional Access for Digital Audio Broadast. TC/035: White Paper, by IBM Research; IBM Research Report RZ2400 (February 2002), January 2003.

[7] Mike Nidd and Dirk Husemann. CA-PK: conditional access for broadcast networks. *Software - Practice and Experience*, 33(5):481–496, April 2003.

[8] Dirk Husemann and Mike Nidd. Comparing HECA & CA-PK. Paper available on demand to World DAB Forum members, 2002.

[9] Reto Hermann, Dirk Husemann, Michael Moser, Michael Nidd, Christian Rohner, and Andreas Schade. DEAPspace: Transient Ad-Hoc Networking of Pervasive Devices. *Computer Networks*, 35(4):411–428, March 2001.

[10] Dirk Husemann. Pervasive Computing: Hogwarts, StarTrek, Reality and Back. *Computer Networks*, 35(4):373–375, March 2001.

[11] Dirk Husemann. Standards in the smart card world. *Computer Networks*, 36(4):473–487, July 2001.

[12] Colin Allison, Duncan McPherson, and Dirk Husemann. New channels, old concerns: scalable and reliable data dissemination. In *Proceedings of the 9th workshop on ACM SIGOPS European workshop: beyond the PC: new challenges for the operating system*, 115–120. ACM SIGOPS, ACM Press, New York, NY, USA, 2000.

[13] Collin Allison, Duncan McPherson, and Dirk Husemann. Internet Broadcasting. In M Merabti (ed.), *1st Annual Postgraduate Symposium on the Convergence of Telecommunications, Networking and Broadcasting (EPSRC PGNet 2000), Liverpool*, 13–18. EPSRC, 2000.

[14] Reto Hermann, Dirk Husemann, and Peter Trommler. The OpenCard Framework. In *Smart Card Research and Applications, This International Conference, CARDIS '98, Louvain-la-Neuve, Belgium, September 14-16, 1998, Proceedings*, volume 1820 of *Lecture Notes in Computer Science*, 52–70. Springer, 2000. ISBN 3-540-67923-5.

[15] Dirk Husemann. The Smart Card: Don't Leave Home Without It. *IEEE Concurrency*, 7(2):24–27, April–June 1999.

[16] Dirk Husemann and Reto Hermann. Open Card: Talking to Your Smart Card. *IEEE Concurrency*, 7(3):53–57, 1999.

[17] Reto Hermann and Dirk Husemann. OpenCard Framework 1.0 White Paper. Internet publication http://www.opencard.org/, 1998.

[18] Dirk Husemann and Reto Hermann. Open Card Framework (White Paper and API Specification). Internet publications, Network Computer Reference Profile, March 1997.

[19] Dirk Husemann. *Multimedia Data Streams in Distributed Object-Oriented Operating Systems*, volume 29 of *Arbeitsberichte des Institut für Mathematische Maschinen und Datenverarbeitung (Informatik)*. Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany, February 1996.

[20] Dirk Husemann. Racoon—Unterstützung multimedialer Echtzeit-Kommunikationsanwendungen. In *Pearl 94: Workshop Über Realzeitsysteme*, 41–54. Springer, 1994.

[21] Dirk Husemann. X.25 als Protokoll für hohe Bandbreiten — Ausbaufähig. *iX Multiuser-Multitasking-Magazin*, 1993.

[22] Dirk Husemann. ISO CONS in LANs — Making It All Work: A European Contribution to 4.4 BSD UNIX. *Computer Networks and ISDN Systems*, 25(4–5):411–419, 1992.

patents

[1] Carl Binding, Francois Dolivo, Dirk Husemann, and Reto Hermann. Message handling at a mobile device, June 2007. Pending.

[2] Carl Binding, Francois Dolivo, Dirk Husemann, and Reto Hermann. Monitoring device and method for monitoring the status of a cargo container, May 2006. Pending.

[3] Dirk Husemann, Francois Dolivo, Reto Hermann, and Carl Binding. Message handling at a mobile device, June 2006. Pending.

[4] Francois Dolivo, Reto Hermann, Dirk Husemann, and Michael Nidd. Container-tracking for secure and safe trading lane shipments, May 2003. Pending.

[5] Francois Dolivo and Dirk Husemann. Granting access to a system based on the use of a card having stored user data thereon, April 2003. Pending.

[6] Dirk Husemann, Michael E. Nidd, and Jonathan O Waddilove. Mobile hub and managing events in a mobile hub, July 2003. Pending.

[7] Dirk Husemann, Bryan L. Striemer, and Robert E. Steinbugler. Body monitoring using local area wireless interfaces, February 2003. Pending.

[8] Dirk Husemann and Michael E. Nidd. Access to encrypted broadcast content, November 2001. Granted in US (7248694).

[9] Carl Binding, Francois Dolivo, Reto Hermann, Dirk Husemann, and Andreas Schade. Packet-oriented data communications between mobile and fixed data networks, October 2000. Granted in Taiwan (NI-189141), Europe (1397900).

[10] Reto Hermann, Dirk Husemann, Michael Moser, and Michael E. Nidd. Method and device for prompt and efficient service discovery in wireless networks, February 2000. Pending.

[11] Reto Hermann, Dirk Husemann, Michael Moser, and Andreas Schade. Payment for network-based commercial transactions using a mobile phone, February 2000. Granted in Singapore (108249), pending in Europe.

[12] Reto Hermann, Dirk Husemann, Michael Moser, Michael E. Nidd, and Andreas Schade. Portable electronic device updated via broadcast channel, March 1999. Granted in US (6904567).

[13] Dirk Husemann and Michael Moser. Downloadable user-interface, April 1999. Granted in Korea (400090).

[14] Reto Hermann and Dirk Husemann. Method, apparatus, and communictation system for exchange information in pervasive environments, August 1998. Granted in Korea (357271), China (ZL99127447.4).

[15] Reto Hermann, Dirk Husemann, Michael Moser, Michael E. Nidd, and Andreas Schade. Adjacency-bound service discovery, September 1998. Granted in US (6633757), Korea (347735), Japan (3507748),.

[16] Stefan T. Hild, Dirk Husemann, and Michael E. Nidd. Service advertisements in wireless local networks, May 1998. Granted in US (6532368), Japan (3484126).

[17] Dirk Husemann and Michael Moser. Method and apparatus for providing a more powerful user-interface to a device with a limited user-interface, December 1998. Pending.

[18] Jörg H. Bischof, Thomas Eirich, and Dirk Husemann. Protecting resources in a distributed computer system, December 1996. Granted in US (6658573), Korea (373526), Japan (3381927), Europe (953172), Germany (69706440.9).

[19] Dirk Husemann and Matthias Kaiserswerth. Smart card mechanism and method for obtaining electronic tickets for goods and services over an open communications link, November 1996. Granted in US (6192349).