CIS 640 – Advanced Topics in Computer Systems: Mobile Computing

Spring 1998

Reading List
(Volume I)

Introduction and Overview

1. G. H. Forman and J. Zahorjan. The Challenges of Mobile Computing. *IEEE Computer*, 27(4):38–47, April 1994.
2. M. Satyanarayanan. Fundamental Challenges in Mobile Computing. In *Proceedings of the 15th Annual ACM Symposium on Principles of Distributed Computing*, pages 1–7, May 1996.
3. T. Imielinski and B. R. Badrinath. Wireless Mobile Computing : Challenges in Data Management. *Communications of the ACM*, 37(10):19–27, Oct. 1994.
4. D. C. Cox. Wireless Personal Communications: What Is It? *IEEE Personal Communications*, 2(2):20–35, April 1995.
5. M. Weiser. Some Computer Science Issues in Ubiquitous Computing. *Communications of the ACM*, 36(7):74–84, July 1993.

Network Protocols/Mobile IP

1. C. E. Perkins. Mobile IP. *IEEE Communications Magazine*, 35(5):84–99, May 1997.
2. F. Teraoka, K. Uehara, H. Sunahara, and J. Murai. VIP: A Protocol Providing Host Mobility. *Communications of the ACM*, 37(8):67–75, 113, August 1994.
3. T. Blackwell and et al. Secure Short-Cut Routing for Mobile IP. In *Proceedings of the USENIX Summer 1994 Conference*, pages 305–316, June 1994.
4. C. E. Perkins and D. B. Johnson. Mobility Support in IPv6. In *MobiCom '96. Proceedings of the 3rd Annual ACM/IEEE International Conference on Mobile Computing and Networking*, pages 27–37, June 1996.

Measurement and Analysis

1. R. Cácers and L. Iftode. The Effects of Mobility on Reliable Transport Protocols. In *Proceedings of the 14th International Conference on Distributed Computing Systems*, pages 12–20, June 1994.
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3. P. Xuan, S. Sen, O. González, J. Fernandez, and K. Ramamritham. Broadcast on Demand: Efficient and Timely Dissemination of Data in Mobile Environments. In *Proceedings of Real-Time Technology and Applications Symposium*, pages 38–48, June 1997.

4. A. Bestavros. AIDA-based Real-Time Fault-Tolerant Broadcast Disks. In *Proceedings of Real-Time Technology and Applications Symposium*, pages 49–58, June 1996.

5. S. Acharya, R. Alonso, M. Franklin, and S. Zdonik. Broadcast Disk Data Management for Asymmetric Communication Environments. *SIGMOD Record*, 24(2):199–210, June 1995.

6. T. Imielinski and S. Viswanathan. Data on Air: Organization and Access. *IEEE Transactions on Knowledge and Data Engineering*, 9(3):353–372, May/June 1997.

7. M. A. Butrico, H. Chang, A. Cocchi, N. H. Cohen, D. G. Shea, and S. E. Smith. Gold Rush: Mobile Transaction Middleware with Java-Object Replication. In *Proceedings of the 3rd USENIX Conference on Object-Oriented Technologies (COOTS)*, pages 91–101, June 1997.

Application Structure

1. C. K. Kantarjiev, A. Demers, R. Frederick, R. T. Krivacic, and M. Weiser. Experiences with X in a Wireless Environment. In *Proceedings of the 1st USENIX Symposium on Mobile and Location-Independent Computing*, pages 117–128, August 1993.

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(Volume II)

Programming Supports and Programming Languages

1. B. Noble, M. Satyanarayanan, D. Narayanan, J. E. Tilton, J. Flinn, and K. Walker. Agile Application-Aware Adaptation for Mobility. In *Proceedings of the 16th ACM Symposium on Operating System Principles*, pages 276–287, Oct. 1997.

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3. T. Thorn. Programming Language for Mobile Code. *ACM Computing Survey*, 3(3):213–239, Sept. 1997.

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5. R. S. Gray. Agent Tcl: A Flexible and Secure Mobile-agent System. In *Proceedings of the 1996 Tcl/Tk Workshop*, pages 9–23, July 1996.

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Formal Models for Specification and Analysis

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2. R. Milner, J. Parrow, and D. Walker. A Calculus of Mobile Processes II. *Information and Computation*, 100(1):41–77, 1992.

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4. C. D. Wilcox and G.-C. Roman. Reasoning about Places, Times, and Actions in the Presence of Mobility. *IEEE Transactions on Software Engineering*, 22(4):225–247, April 1996.

5. G.-C. Roman, P. J. McCann, and J. Y. Plun. Mobile UNITY: Reasoning and Specification in Mobile Computing. *ACM Transactions on Software Engineering and Methodology*, 6(3):250–282, July 1997.

6. R. M. Amadio and S. Coupet-Grimal. Modelling IP Mobility. Technical Report Rapport Interne 245, Laboratoire d'Informatique de Marseill, Oct. 1997.

Security and Protection

1. T. Jaeger and A. Prakash. Building Systems That Flexibly Download Executable Content. In *Proceedings of the 6th USENIX Security Symposium*, pages 131–148, June 1996.

2. D. Hagimont and L. Ismail. A Protection Scheme for Mobile Agents on Java . In *MobiCom '97. Proceedings of the 3rd Annual ACM/IEEE International Conference on Mobile Computing and Networking*, pages 215–222, Sept. 1997.

3. B. Patel and J. Crowcroft. Ticket Based Service Access for the Mobile User. In *MobiCom '97. Proceedings of the 3rd Annual ACM/IEEE International Conference on Mobile Computing and Networking*, pages 223–233, Sept. 1997.

4. D. S. Wallach, D. Balfanzi, D. Dean, and E. W. Felton Extensible Security Architecture for Java. Technical Report 546-97, Department of Computer Science, Princeton University, April 1997.

Relevant Web sites:

- http://www.cs.auc.dk/mobility/
- http://www.cs.indiana.edu/hyplan/pierce/common/prof/Mobility.html
- http://www.cs.umd.edu/projects/mcml/mcothers.html
- http://www-sor.inria.fr/~aline/
- http://mosquitonet.stanford.edu/mobile/