

EECS 298: Embedded Software Synthesis Lecture 6

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Lecture 6: Overview

- Project Status and Progress
- Embedded Operating Systems
 - Requirements
 - Real-time OS
 - Middleware
 - Presentation: RTOS Survey (Howard Chen)
- Embedded System Design with SpecC
 - Embedded System Design Flow
 - System-on-Chip Environment (SCE)
 - Demo

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Project Status and Progress

<ul style="list-style-type: none"> • Option 1: Hands-on Experience with Embedded Software – CJC: Mobile IP (embedded Linux) on wireless access point – CBH: Port PalmOS application to WindowsCE – SYC+CWS: Traffic light controller on Xilinx board – QKN + RL: Temperature sensor on flash microcontroller – ML + HL: Instant messenger application on mobile phone – KLN: Snake game (Java) on mobile phone – SI: Real-time UML/Java appl. wallet PDA, cash register PC • Option 2: Literature Research – HEC: RTOS survey – KDS: Target processor survey – GK: Power management for embedded applications – EKS: Code generation for embedded processors • Option 3: Embedded Software Synthesis using SpecC – JHB: Reed-Solomon decoder – AG: Digital camera – TWH: Tic-tac-toe game – GS: Wireless sensor node measuring motion – ISG: Controller (traffic light, elevator, ...) – HCL: Algorithm evaluation for fair packet scheduling 	<p>Schedule</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>Week 6</p> <p>Week 7</p> <p>Week 7</p> <p>Week 8?</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p> <p>TBD</p>
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EECS298: Embedded Software Synthesis, Lecture 6 (c) 2004 R. Doemer 4

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Embedded Operating Systems

- Chapter 4, part 3, of
“Embedded System Design”
by P. Marwedel (Univ. of Dortmund, Germany),
Kluwer Academic Publishers, 2003.
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EECS298: Embedded Software Synthesis, Lecture 6 (c) 2004 R. Doemer 7



