

Name	Signature	Student Id Nr	Points

Operating Systems, miniexam 7, 3.5.2017 (6p)

Write your answer on this exam paper in the space given. Please notice, that the exam paper is 2-sided.

Embedded Systems

a) [2 p] The eCos operating system has also event flags for process synchronization. How do they work?

Give a concrete example on a synchronization problem that is difficult to solve with busy-wait locks, semaphores, or monitor, but that is easy to solve with event flags.

Why is your example difficult to solve with semaphores?

How do you solve (pseudocode) your example problem with (eCos) event flags?

b) [1 p] How does the eCos scheduling support real time applications? How can you guarantee, that real time periodic tasks are executed in time?

Distributed Systems

c) [2 p] Which problem is solved with RPC?

How is RPC implemented?

What specific problems are there in RPC implementation?

d) [1 p] Which problem is solved with SOA? How does SOA relate to RPC?

How does SOA work?