Travel Report RTCSA'2000

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Abstract

This document describes my visit at the conference RTCSA'2000 in South Korea. Facts about the conference is available at http://casaturn.kaist.ac.kr/~rtcsa/, so I focus on my impressions.

1 Motivation

I went to RTCSA'2000 to present my paper: "Fixed-priority preemptive multiprocessor scheduling:to partition or not to partition".

2 Impressions

Trends Based on papers from this conference and other conferences I have observed an increase in interest in the following areas: (i) energy-efficient scheduling, (ii) wireless real-time communication (iii) scheduling on processors based on future architectural ideas, e.g multi-threaded processors.

One of the invited speakers worked at Samsung. He stressed two trends: (i) the need to make software upgrades with minimal user involvement and (ii) many embedded systems of the future will be connected to the Internet.

Invited Talks Al Mok gave an interesting talk about scheduling anomalies for non-preemptive scheduling on a uniprocessor. That talk dealt with problems that are similar to problems that I study.

Papers For my research I found the following papers interesting.

- *"Real-time Multiple Video Player Systems", Chris C.H. Ngan, Kam-Yiu Lam* The paper describes feedback control scheduling, with the following unique features: (i) it uses fixed-priority rather than dynamic priority, (ii) a task that misses its deadline receives a higher priority directly even if its deadline and period is not changed, (iii) the scheme handles dependent tasks by raising priority to both the task that missed its deadline and its preceding tasks, and (iv) a preceding task has higher priority than the task that it precedes.
- *"Space efficient wait-free buffer sharing in multiprocessor real-time systems based on timing information", Håkan Sundell, Philippas Tsigas* The paper enables more innovative scheduling techniques.
- *"Efficient Pure-buffer Algorithms for Real-time Systems", James H. Anderson, Philip Holman* The paper enables more innovative scheduling techniques.
- *"A Comparative Study of the Realization of Rate-Based Computing Services in General Purpose Operating Systems", Kevin Jeffay, Gerardo Lamastra* The paper suggests that different rate-based scheduling policies should be used to schedule different layers in the operating system.

People Many researchers in the Artes network attended the conference. At the banquet, one Japanese researcher at my table suggested that the conference should be held in Sweden in the future.

There are some people who are studying a similar problem that I study, and I hoped to meet them. They are coauthors to other papers presented at RTCSA'2000. Unfortunately they did not attend the conference.

Human aspects South Korea in December is as cold as Sweden in December. The Korean food often consists of seafood. I had a problem to eat that, but I found the Japanese food to be easier to eat.

I found the employees at the hotel to be service minded. For example: hotel reservation via fax, something that usually screws up, did work this time.

Some Koreans, for example researchers and flight personnel, know English. However in general, Koreans do not know English.