Linux Kernel CPU Resource Reservation

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What is demonstrated

Linux assigns higher priority to a real-time process than a Time-Sharing process so that no other processes could run if some real-time process would not release the CPU resource. In order to realize comfortable GUI in embedded systems like DTV which consists of real-time processes, interactive processes and background processes, we need to assign the CPU resource to a particular process which takes care of GUI.

We implement CPU Resource Reservation Feature which specifies Upper Limit as well as Lower Limit of CPU usage for a process so that we could get response in acceptable time from a particular process.

How was the Linux improved

**Block of RT**

RT processes are limited in maximum execution time in a defined period

**Priority Boost Idea**

Time-Sharing processes are boosted temporarily to RT processes, and minimum execution time is guaranteed

Hardware Information

Renesas RTS7751R2D
RealView Versatile ARM926EJ-S

Patch (Source Code) Availability

The patch will be available in the CELF patch archive.