SPEAr ARM Linux Overview

Introduction

SPEAr (Structured Processor Enhanced Architecture). weblink : http://www.st.com/spear

The ST Microelectronics SPEAr range of ARM9/CortexA9 System-on-Chip CPUs are supported by the 'spear' platform of ARM Linux. Currently SPEAr1310, SPEAr1340, SPEAr300, SPEAr310, SPEAr320 and SPEAr600 SOCs are supported.

Hierarchy in SPEAr is as follows:

SPEAr (Platform)

- SPEAr3XX (3XX SOC series, based on ARM9)
    - SPEAr300 (SOC)
        - SPEAr300 Evaluation Board
    - SPEAr310 (SOC)
        - SPEAr310 Evaluation Board
    - SPEAr320 (SOC)
        - SPEAr320 Evaluation Board
- SPEAr6XX (6XX SOC series, based on ARM9)
    - SPEAr600 (SOC)
        - SPEAr600 Evaluation Board
- SPEAr13XX (13XX SOC series, based on ARM CORTEXA9)
    - SPEAr1310 (SOC)
        - SPEAr1310 Evaluation Board
    - SPEAr1340 (SOC)
        - SPEAr1340 Evaluation Board

Configuration

A generic configuration is provided for each machine, and can be used as the default by:

```
make spear13xx_defconfig
make spear3xx_defconfig
make spear6xx_defconfig
```

Layout

The common files for multiple machine families (SPEAr3xx, SPEAr6xx and SPEAr13xx) are located in the platform code contained in arch/arm/plat-spear with headers in plat/.

Each machine series have a directory with name arch/arm/mach-spear followed by series name. Like mach-spear3xx, mach-spear6xx and mach-spear13xx.

Common file for machines of spear3xx family is mach-spear3xx/spear3xx.c, for spear6xx is mach-spear6xx/spear6xx.c and for spear13xx family is mach-spear13xx/spear13xx.c. mach-spear* also contain soc/machine specific files, like spear1310.c, spear1340.c spear300.c, spear310.c, spear320.c and spear600.c. mach-spear* doesn't contains board specific files as they fully support Flattened Device Tree.

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