Digital Signal Processors

Course title: Digital Signal Processors
Course code: EIFB632
Type of course: Lecture
Level of course: Bachelor
Degree Program: Communications Engineering and Information Technology
Year of study: Third year
ECTS Credits: 2
Semester: 6th semester
Name of the lecturer: Prof. Dr. Franz Quint

Course contents: After a brief explanation of the architecture and characteristics of digital signal processors, the focus of this lecture is on programming real-time applications and the implementation of typical algorithms in digital signal processing, such as filtering, the generation of sinusoids etc. The usage of interrupts, DMA and serial ports is an important topic.

Prerequisites: Knowledge in Digital Signal Processing

Course objectives expressed in learning outcomes and competences:
After having successfully completed the course, the students should:
- be able to choose the signal processor which suits the needs of the application,
- be able to implement DSP algorithms on the processor, to profile them and to get them working in real time.

Language of instruction: English
Teaching methods: Lecture supported by Power Point slides and practical signal processor programming exercises

Assessment methods:

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<th>Written exam</th>
<th>X Presentation</th>
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<td>Written assignment</td>
<td>X Project work</td>
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<td>X Oral exam</td>
<td>Practical exercises</td>
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Recommended reading:
Bateman, Andrew: The DSP handbook : algorithms, applications and design techniques, Prentice Hall, Harlow, 2002