

Distributed and Operating Systems Group

# $\mathbf{A} \text{dvanced } \mathbf{O} \text{perating } \mathbf{S} \text{ystem } \mathbf{I} \text{ssues } (\mathbf{AOSI})$

Excercise Sheet 2 Due date: 08.11.2012

### **1** Communication Models

Define the basic idea of communication and the special characteristics in the fallowing communication models: Message Passing, Remote Procedure Call, Shared Data Spaces, Publish/Subscribe

#### 2 Message Passing

Is the TCP protocol appropriate to realize cooperation in a distributed System? Give reasons for your decisions!

## 3 RPC

Imagine a crashing server during the processing of a synchronous RPC of a client. Which problems can happen?

### 4 Shared Data Spaces

Why is it necessary for data space to be immutable? How can an overwrite operation be simulated by the existing operations on the data space?

### 5 Publish/Subscribe

Describe why multicast support is beneficial for a Publish/Subscribe communication.