



Technische
Universität
Braunschweig



Parallel Computing

Exercise 4 – MPI Inter process communication

Andres Rodriguez, 21th May 2015

Homework 4 - Remember

✓ Deadline

31.05.2015 - 11:59:pm

✓ E-mail

Andres Rodriguez

a.rodriquez-escobar@tu-braunschweig.de

✓ Content

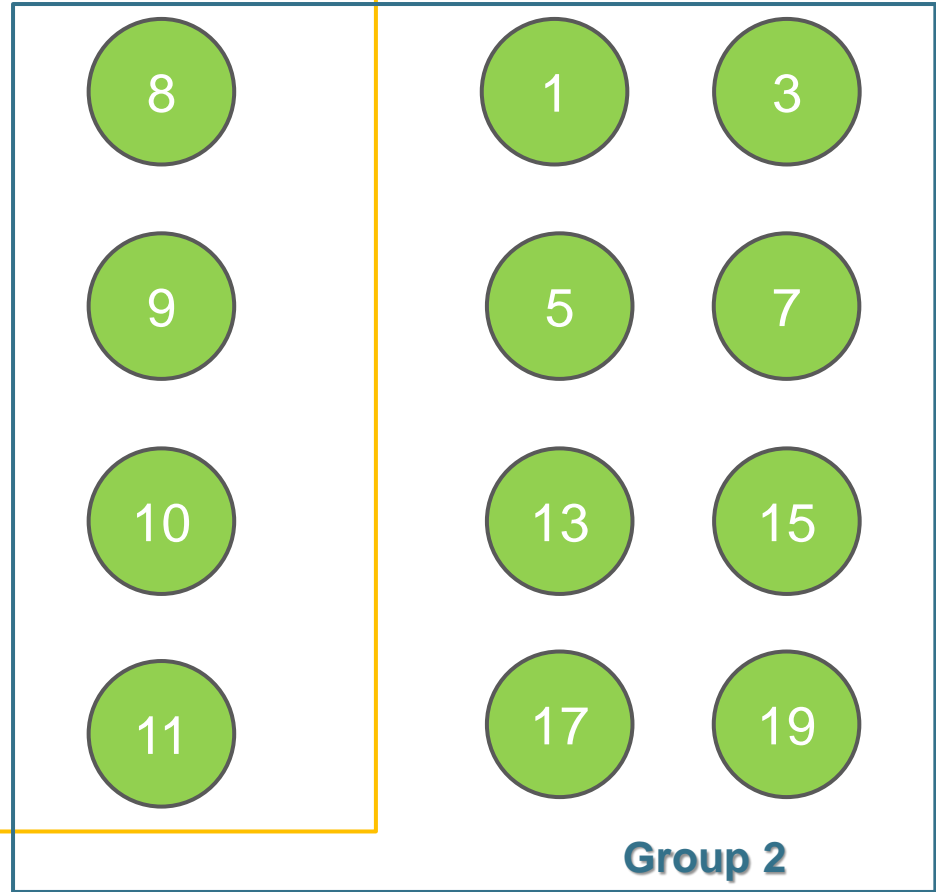
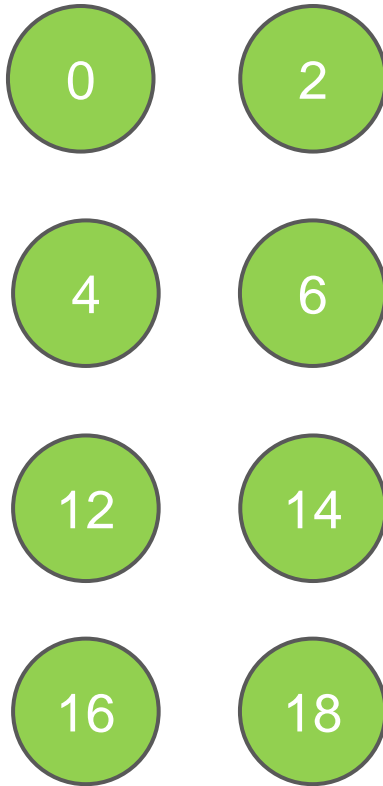
ZIP file including

- Source code
- Written report as *.pdf file

Communication Groups

MPI_COMM_WORLD

Group 1



Communication Groups

✓ General steps for create new communicators

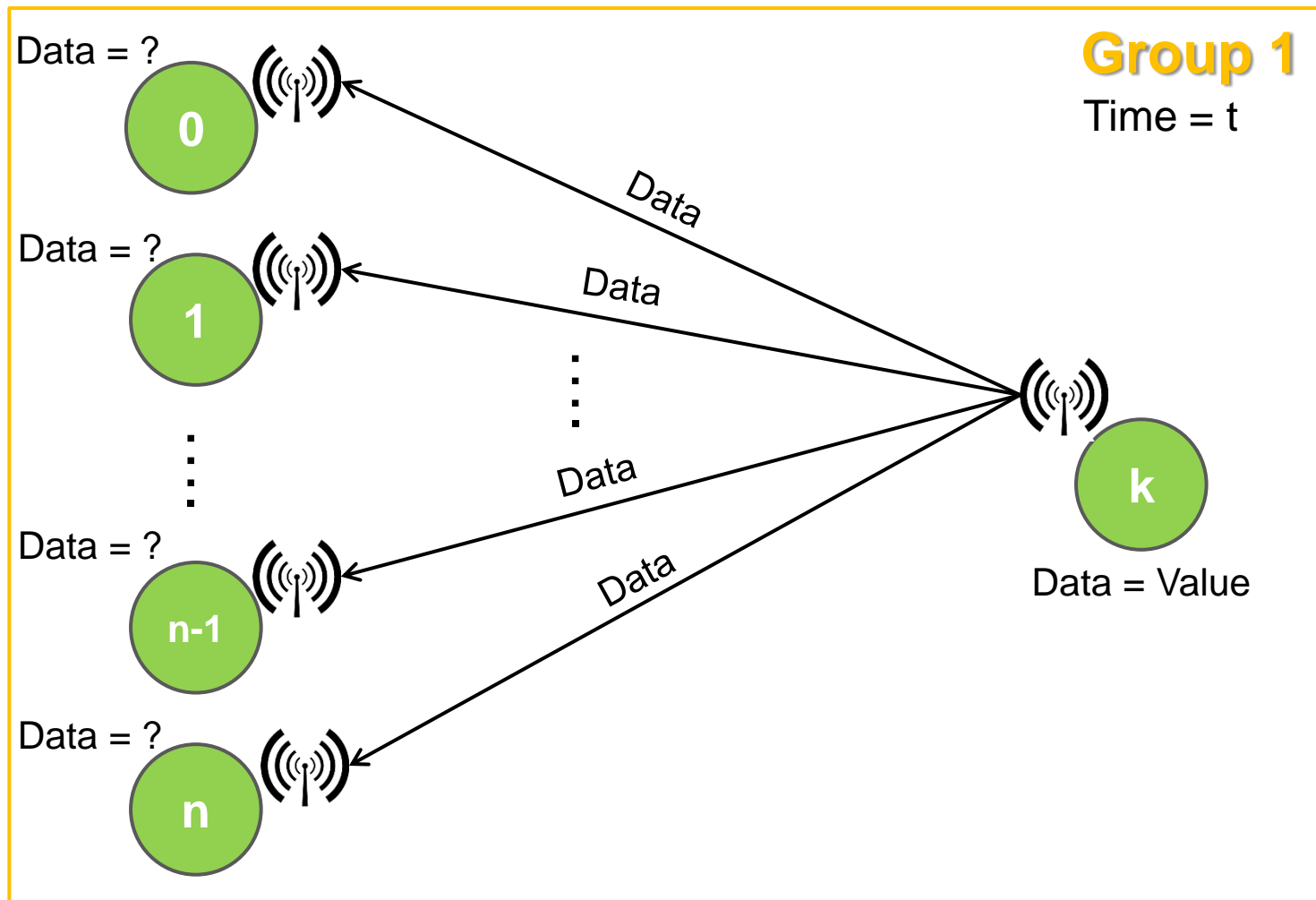
1. Extract handle of global group from MPI_COMM_WORLD using **MPI_Comm_group**
2. Form new group as a subset of global group using **MPI_Group_incl**
3. Create new communicator for new group using **MPI_Comm_create**
4. Determine new rank in new communicator using **MPI_Comm_rank**

Creation of Groups and Communicators

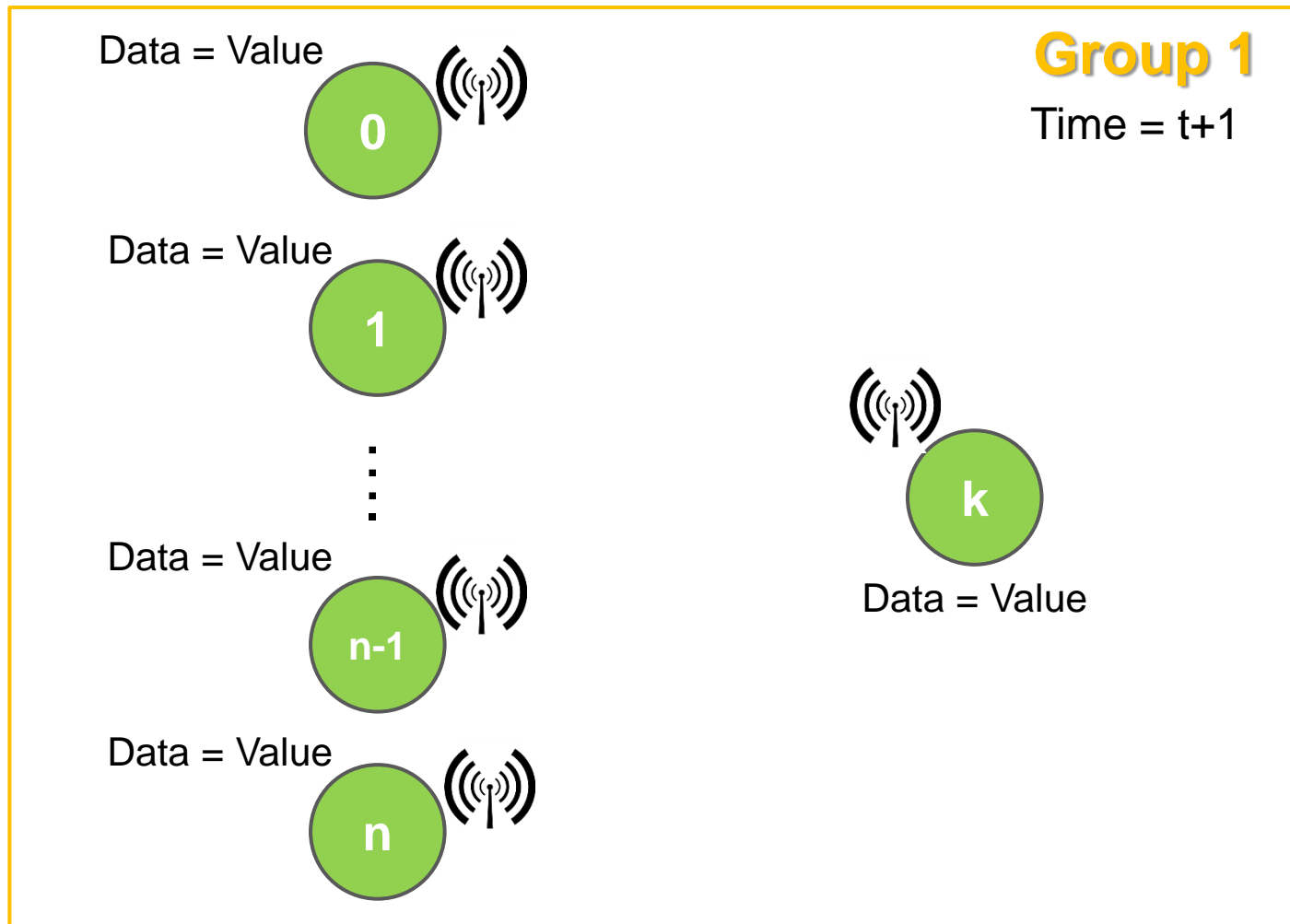
-

Intersected groups example

MPI – Broadcasting



MPI – Broadcasting



Broadcasting Operation

-

“Manual” and Command (Wrapped) versions

Summarizing example - Communicators and Broadcast