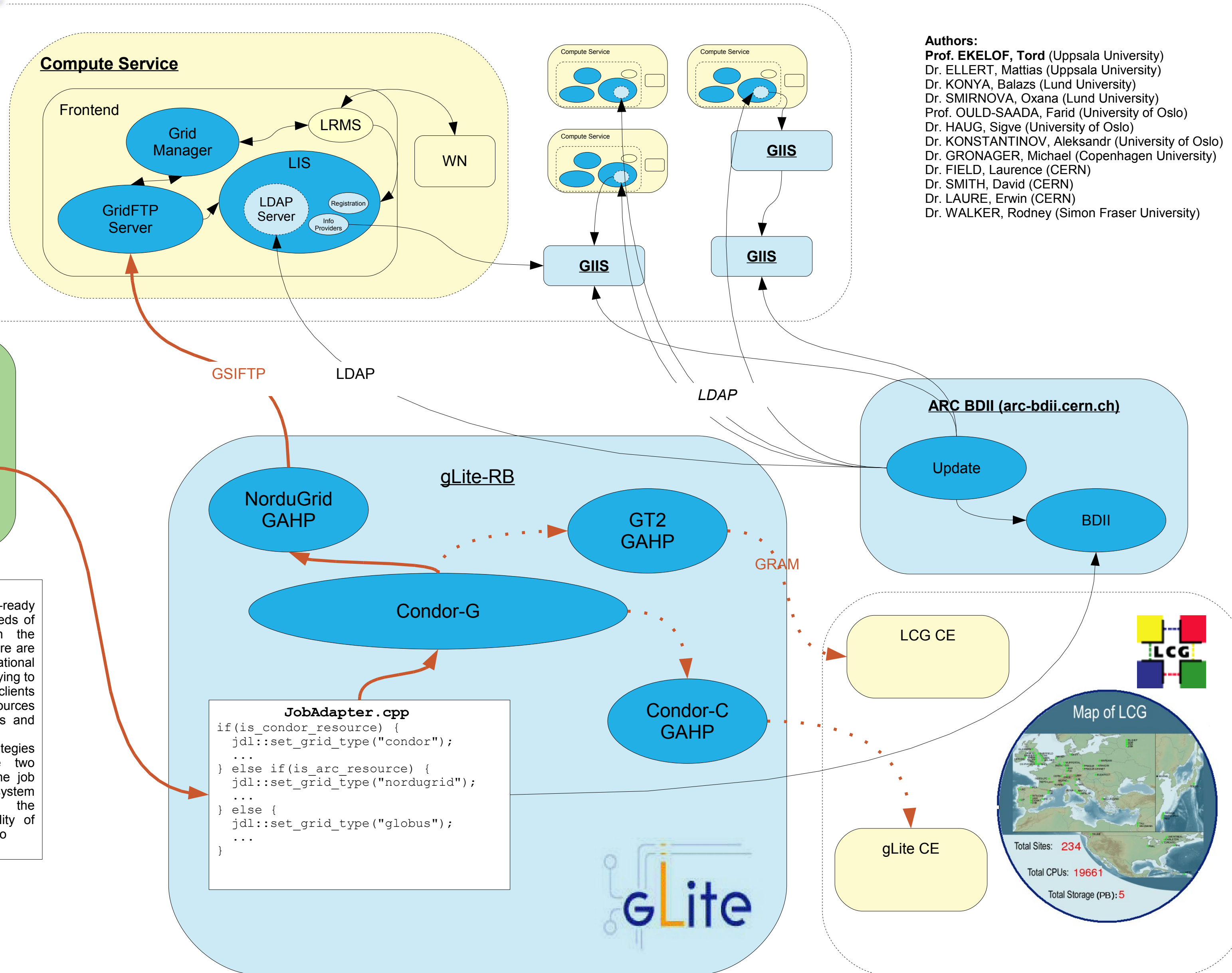
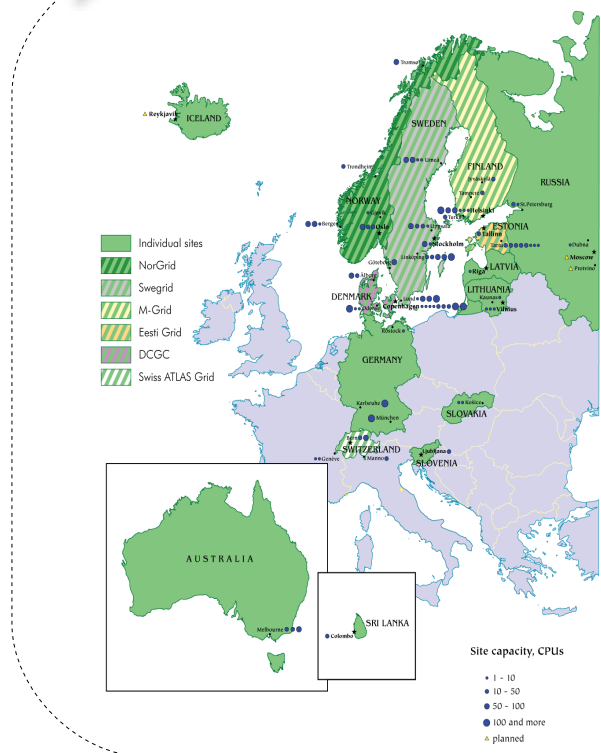


LCG and ARC middleware interoperability



Authors:
Prof. EKELOF, Tord (Uppsala University)
 Dr. ELLERT, Mattias (Uppsala University)
 Dr. KONYA, Balazs (Lund University)
 Dr. SMIRNOVA, Oxana (Lund University)
 Prof. OULD-SAAD, Farid (University of Oslo)
 Dr. HAUG, Sigve (University of Oslo)
 Dr. KONSTANTINOV, Aleksandr (University of Oslo)
 Dr. GRONAGER, Michael (Copenhagen University)
 Dr. FIELD, Laurence (CERN)
 Dr. SMITH, David (CERN)
 Dr. LAURE, Erwin (CERN)
 Dr. WALKER, Rodney (Simon Fraser University)

gLite User Interface

```
> glite-job-submit\  
  job.jdl
```

Abstract
 LCG and ARC are two of the major production-ready Grid middleware solutions being used by hundreds of HEP researchers every day. Even though the middlewares are based on same technology, there are substantial architectural and implementational divergencies. An ordinary user faces difficulties trying to cross the boundaries of the two systems: ARC clients so far have not been capable accessing LCG resources and vice versa. After presenting the similarities and differences of the LCG and ARC middlewares, we will focus on the strategies implementing interoperable layers over the two middlewares. The most important areas are the job submission and management and information system components. The basic requirement for the interoperability layer implementation is capability of transparent cross Grid job submission from LCG to ARC.

```
JobAdapter.cpp  
if(is_condor_resource) {  
  jdl::set_grid_type("condor");  
  ...  
} else if(is_arc_resource) {  
  jdl::set_grid_type("nordugrid");  
  ...  
} else {  
  jdl::set_grid_type("globus");  
  ...  
}
```