Structure and Organization of KDE

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1. **Research question:**
   Does the software production at KDE only work through cooperation?

**Method of the case study:**
- explorative
- half-structured expert interviews
- analysis of documents, esp. homepages
- quantitative questionnaire (55 answers)
- secondary analysis of 62 interviews (self-information) from KDE-members
2. What is KDE? – the structure of the large-scale project

- KDE = large-scale open source project
- approx. 1200-1300 participants; number still growing
- embedded in social movement – hobbyists: focus on technical excellence
- institutional basis: open source code; licence (GPL)
- founded in 1996 at the University of Tübingen
- focal point: production of joint software (desktop und applications)
- several tasks: software developers 2/3, translators/documentators 1/3, graphic/sound <5%, only some exclusive homepage-journalists, bugreporters
- important media of communication: mailing lists (chat >face-to-face>phone)
- important media of production: versioning system on the Internet, bugreport system, developer tools
- the large-scale project consists of subprojects for special software themes
- software/projects are central (core libs.)
- in projects: one project leader and several participants
- projects: average 4 persons (min=1; av. max=8; max=20/50)
- work done: average in 2 projects, majority in 1 project (min=0; max=9)
A typical KDE-participant is:
- young (between 20 and 30 years old; min 16, max 50)
- male
- highly qualified (*went to college/university*)
- a student or employed
- an IT-professional (has an IT- or IT-relevant qualification)
- principally from Germany (worldwide: Europe and USA/Canada)
- partially regional clusters
- single (not married/no kids)
- working voluntarily in his spare time (*only few are paid for work on KDE*)
- Working time: arithmetical mean 15.3/ median 10 hours per week (min 0.5; max 90)

- Different motivations:
  - personal requirements: self-motivation/preference for developing (bricolage mentality)/intellectual interest
  - supported through teamwork, relations in the community = cooperation
3a. The developers: the inner circle – definition
The inner circle:

- is a loosely coupled group of long-time project participants without leading figures; rest = outer circle

- have a high reputation: permanent achievements for the project, quality, complexity of the work task, expectation of rapid revision of work
- work on important software (core libs.)/mailing lists (visibility)
- important positions as founding-member or takeover through reputation (project leader, release coordinator, project maintaining functions)
  ⇒ competition for positions through reputation
- cooperative communication expected
3b. The Developers: the inner circle – the tasks

Tasks in KDE:

- Entrance prerequisites = number of code lines, control of quality and test of persistence and self-motivation and control through inner circle

- no influence on work/task distribution, because of voluntary selection according to interest

- production: influence on planning discussion through high experience; help with problems/tasks
- work/task combination: through release coordinator with support of participants (both from inner circle)

- Control:
  a) self- and peer-review-control; inner circle through random sampling
  b) compliance with communication/production norms

- Summary: aim is unity of the project
  ⇒ hierarchical element
Tasks outside KDE:

1. monitoring of norms with respect to licence (GPL) at companies:
   - logos/copyright
   - prompt return of source code

2. contact to other OS-projects with overlapping aims/themes (debian, gnome, ...)

4. The other groups

- Not so important as developers because of distance to source code development

a) Documentators: One person as project leader on top, several subprojects around important software with project leader and participants

b) Translators: each language has a translation project with project leader on top level. Projects are divided into subprojects around important software.
4. The other groups

- Both groups depend on self-motivation with cooperative communication.
- but are more hierarchical than the developers because only (sub-)project leaders have access to versioning system.
- competition for project leader position
5. Summary: How KDE works

- Cooperation (supports self-motivation)
- Hierarchy (coordination of the whole project; no instructions)
- Competition (motivation for reputation, occupation of a small amount of positions)