CloudTeams: Bridging the Gap between Developers and Customers during Software Development Processes

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This talk

- Motivation / Challenge
- CloudTeams approach
- Related work
- Our user study
  - Method and results
- Conclusion
Motivation / Challenge

• Costs of software development decrease
• Lots of new services (IaaS, PaaS, SaaS)
• Lower entry barriers to the market
• Increasing competition
• Getting towards the customers becomes a vital criterion
• Small teams have less chance to get towards customers
• Resources are limited, customer contact is expensive

→ CloudTeams is a means to help in this situation
Related work

How is software developed?

• Traditional: Waterfall

• More recent: Scrum based methods: Iterative and incremental

But
No customer in the loop!

CloudTeams
Different methods + Customer
Related work – 2

- Open and collaborative software development
  - GitHub
- Support for local + distributed processes
  - CollabNet, JIRA, Confluence, Trello
- User data
  - FitBit, Runkeeper
- Social Networks
  - FB, Twitter, Foursquare
- But: Bringing all this together?
CloudTeams approach

- Build a platform for both allows software developers and customers
- Enable interaction during the whole software development process
- Collaborative work towards new software products
- Motivated, real customers
- Interdisciplinary communities around projects
- Novel ways of interaction between customers and software developers

- Short: Build software in a trusted, collaborative process with motivated customers and happy software developers
CloudTeams approach – Customer side

CloudTeams for end users

- Invite friends
- Rate projects
- Give feedback
- Test prototypes
- Be an early user
- Search for projects
- Subscribe
- Provide activities/interests
- Participate in interviews

Social Networking
Activity Tracking
Time Management

User Community

Google Calendar
RunKeeper
FOURSQUARE
fitbit.
CloudTeams approach – Developer side
CloudTeams approach – bringing it together

CloudTeams for end users
- Search for projects
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- Rate projects
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CloudTeams for developers
- Software project
- Set up project
- Business model
- Libraries
- Visualisation of usage statistics
- Analyzing user data
- Analytics
- Project management
- Team collaboration
- Interviews
- Questionnaires
- User cards
- Testing & Trust
- Prototype development
- Mockups
- Collaborative IDE

User Community

Developer Community

Integration Tools:
- Activity Tracking
- Time Management
- Source Code Repository and Management
- Deployment and Hosting

Technology Stack:
- GitHub
- GitLab
- Bitbucket
- Redmine
- JIRA
- Foursquare
- Fitbit
- RunKeeper
- Google Calendar
- Social Networking

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CloudTeams approach - benefits

Benefits for the user community
- Solutions to problems
- Better products
- Trusted services
- Rewards

Benefits for the developer community
- Team collaboration
- Market insights
- Faster deployment
- Early communities
- Customer development
Our user study – Method

Analysis of the users and software developers needs

- 2 series of structured interviews: 30 w/ software teams, 34 w/ users
- Approx. 30 mins each
- In 4 countries: Greece, The Netherlands, Turkey, and Germany
- Still, rather qualitative than quantitative

- Find out problems of stakeholders, prioritize requirements
- First indications on needs guiding CloudTeams development
Our user study – results & conclusions for users

• All users use e-mail
  • CloudTeams should rely on this
• People like giving feedback to apps, mostly via forums or e-mail
  • Enable feedback loop, but bring customers into the process more early
• wearable devices are not widespread, tracking apps on smartphones are more common
  • Showcase: Enable software development teams to find users of specific technologies
• People like searching for new apps and have strategies for it, e.g. asking persons or search parameters in app stores
  • Develop intelligent ways for finding and sticking to apps & interesting projects, e.g. by categories, facets, following mechanisms, …
Our user study – results & conclusions for software developers

- Most popular SW development method: Agile, followed by SCRUM
- But: Req’s and Evaluation are rather done rigid. So support this
- Mixed roles of SW team members in their organizations
  - Reflect mixed roles
- No wide knowledge/use of ideation tools, crowd-testing, crowd-funding
  - Enable crowd-integration where possible, support ideation
- SW teams have to rely on own dashboard solutions, mostly hand-made
  - Provide configurable dashboard
- SW teams want to understand their customers better
  - Provide information on possible customers
- Real need for finding proper test users
  - Allow inviting test users
After writing this paper...

- CloudTeams development goes on
- Implementation started some weeks ago
- First prototypes will be ready I/16
- CloudTeams user and software developer dashboard
- Connectors to popular online services for users / developers

- More to come…

  … on CloudTeams.eu
Thank you!