

Porting an existing Qt-based
Windows only application
to Mac OS X

- Introduction
- Where we started
- Apple Mac – an unknown country
- With a little help from a “friend”
 - Communication
 - Version Control System
- BuildSystem
 - Compiler
 - IDE
- Customer Support
- Questions?



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- Existing project started 17 years ago
- ca. 300.000 LOC
- Qt 4.7 with Q3Support
- STL, MFC, Windows-API
- Windows as only target
- Visual Studio 2008
- TFS
- Relation between Qt:Non-Qt – 85%:15%
- Print-System is Win-API only
- No experience on Mac OS X or Mac hardware

- We had to learn many new things
- New hardware
 - MacBook Pro
 - 13"
 - 15"
 - 17"
 - Mac Mini as remote testing system

- Mac OS X Versions

- 10.5

- Had some users in Germany
 - But we can't support it

- 10.6

- The oldest version we can support
 - Start of development

•New Mac OS X Versions

•10.7

- Arrised while we were doing the first port
- Our new Macs came with that pre-installed
- Changed its behaviour in some points against 10.6
- Introduced GateKeeper but not active by default

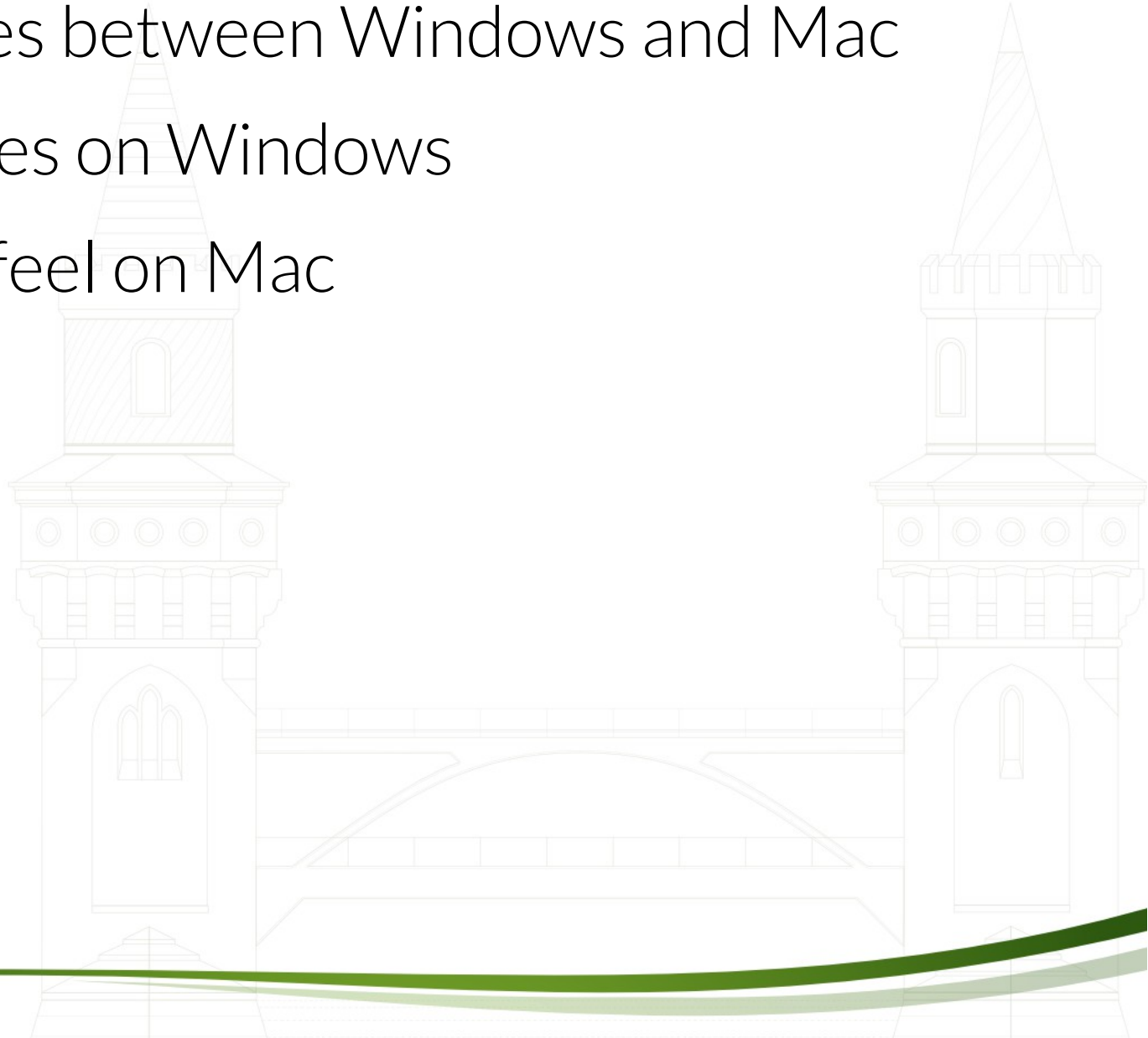
•10.8

- Comes with GateKeeper activated by default
- Makes it harder to get our AppBundle into the AppStore
- Updated Version of XCode removes all commandline compiler and linker tools

- Getting into the AppStore
- Successful Apps have to be sold via AppStore
- High barrier to get there
- Reject mails are hard to understand
 - Some kind of try 'n' error
- Apple is not very patient
 - You are spamming the AppStore!
- No nested AppBundle allowed

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- Visual differences between Windows and Mac
- SSE-specific styles on Windows
- Correct look 'n' feel on Mac



- Character encoding
 - UTF-8 on Mac
 - CP1252 on Windows
- Case sensitive filesystem
 - Not on Windows
 - Not default on Mac
 - But it is possible
 - Users use it

- Don't try this alone!
- Ask an expert for help
- Saves your time, nerves and money
- We asked KDAB for help
- But there are others, too ;-)

With a little help from a “friend” Communication

- Contact to your helping hand is mandatory
- IRC
 - Short response time
 - Not annoying
 - Jabber-Protocol with history
 - Keeps everybody on track
 - Adium IRC-Client on Mac
 - Pidgin on Windows

With a little help from a “friend” Version Control System

- Working on the same codebase at the same time
- Far away from each other
- We use TFS on Windows
- No TFS-Support on Mac

With a little help from a “friend” Version Control System

- Our solution:
 - Using SVN-Bridge
 - Problems:
 - Repository gets out of sync by some operations
 - Renaming or deleting files
 - Check out small parts of your project
 - Don't include more than one branch in your folder structure

- XCode is needed for cmdline tools
- Compiler is version-specific
 - gcc
 - llvm
- Smallest C++-subset needed between
 - gcc
 - llvm
 - Visual Studio 2010

- Windows Microsoft Visual Studio 2010
 - nmake
 - vcxproj-files
- Mac Qt Creator 2.4/2.5
 - make
 - qmake pro-files

- Keep both files in sync
 - Not compatible
 - Do it manually
 - Qt-add-in only for initial conversion
- We can't use shadowbuild
- Release- and Debug-Build

- Think about using cmake
 - Pro: Better dependency resolution
 - Contra: Limited Qt Creator Support



- Netviewer
 - Excellent tool to have a look on customer desktop
 - New Windows version needed to support Mac OS X 10.8
- Report Tool
 - Used to send system information

Questions?



Thank you

