State of QGIS

Graphic: Anita Graser

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Who are we?

Larry Shaffer
Former cartographer
QGIS core committer for 5 years
OSGeo4Mac maintainer
Lead Technical Developer for Desktop product for...

Kurt Menke
Former archaeologist
Certified GIS Professional (GISP)
Author of multiple QGIS books
Award-winning educator
Owner of ...

@dakcarto
@geomenke
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Quantum GIS

- Started in 2002 by Gary Sherman
- 15 years of organic, continuous development
- 30 core developers and 100s of contributors worldwide
- Hundreds of thousands of users

qgis.org

osgeo.org
Who Contributes to QGIS?

Girona

Nødebo

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GeoGig
GeoServer
GDAL/OGR
GRASS
R Statistics
Orfeo Toolbox
SAGA GIS
PostGIS
GeoPackage
GeoNode
Spatialite
GeoCat
Proprietary Formats
OGC
Qt
Python
Oracle Spatial
Project Governance

- Restructuring a success!
- New logo and branding
- Funding development
- Grant program proposals
- Proper legal entity

Your voting representation (23 responses)

- QGIS Country User Group Representative voting member: 65.2%
- QGIS Community Representative voting member: 30.4%
- OSGEO Representative voting member: 4.4%

QGIS.ORG Legal Entity

Chair

BOARD (ex PSC)

QGIS committer appointed voting members

QGIS user group appointed voting members

1 community member per user group elected by QGIS committers

OSGEO appointed voting member

1 Representative per user group

QGIS Community

QGIS User Groups

Graphics: QGIS PSC

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QGIS 2 → 3

Qt 4 to 5

Python 2 to 3

QGIS 2 to 3 API

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What's new in QGIS Desktop?

Fifteen years of organic development

Graphic: QGIS project

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What’s new in QGIS Desktop?

Task Manager
• Background processes
• Used across app
• PyQGIS API
• Utilized by Processing
• Responsive GUI
• Daily operations faster
What's new in QGIS Desktop?

**QGIS 3D!**

- Qt-native 3D support
- Rendered on GPU
- 3D terrain model from DEM layers
- True 3D rendering of vector layers
- 3D map view in map composer
- Identify objects in 3D view and X/Y/Z
- Initial framework
What’s new in QGIS Desktop?

Layer information layout

Data Source Manager

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What's new in QGIS Desktop?

**Digitizing**
- Node and Move feature tools now click-click process
- Integrates with CAD dock!
- Multi-feature editing
- Move and copy operations
What’s new in QGIS Desktop?

Multi-map views

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What’s new in QGIS Desktop?

Composer

- Refactored layout engine
- Mix page sizes and orientations
- New reporting
- Choose CRS for map items
- Sync pictures to true north
- Many options now data-defined
- Drag .qpt templates onto QGIS
- Asynchronous map previews
- Numeric guide positioning
What’s new in QGIS Desktop?

Live layers

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What’s new in QGIS Desktop?

User Profiles

- Stored in APPDATA for each platform and no longer .qgis3
- Profiles isolated from one another

Custom defaults & settings

- New qgis_global_settings.ini file
- Override with --globalsettingsfile or QGIS_GLOBAL_SETTINGS_FILE
- All hard-coded defaults removed from source code
What’s new in QGIS Desktop?

Discrete raster styling

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Graphic: Kurt Menke
What’s new in QGIS Desktop?

Layer dependencies

Options filtering
What’s new in QGIS Desktop?

Zooming to matching features

Graphic: North Road Consulting

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What’s new in QGIS Desktop?

Unified search bar

Point cluster renderer

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What's new in QGIS Desktop?

Authentication System
- OAuth2 method plugin
- Master Password Helper plugin

Store/retrieve password
What’s new in QGIS Desktop?

But wait, there’s more…

- Project may be zipped: `.qgz`
- Copy canvas to clipboard as image
- Lock aspect ratio for Save as image/PDF
- New algorithms to add/delete Z/M values to existing geometries
- New unit type for rendering in meters
- Dynamic form for joined fields
- Algorithms for subdividing geometries
- Drag/drop layers go to background task
- Save map/canvas as PDF
- Paint effect support for label buffers
- Better crash dialog
- Tons of new expressions
- Load/save paletted raster color tables
- Geometry snapping within same layer
- Plugins can embed Options page
- Holding shift while using map zoom tools inverts the zoom
What's changed in QGIS Desktop?

Style Manager 3.0

2.18
What's changed in QGIS Desktop?

Processing

- Now a background task, freeing up GUI!
- Organized by operation
- Changes to modeler (export to PDF/SVG)
- Only QGIS, GDAL algorithms by default
- Find providers in Plugin Manager
- Options now with application's
- Manually rebuild Processing models
Migrating from QGIS 2 to 3

**Project files**

- Migrate < 2.18 projects to latest 2.18 release
- OTF is always ON now
- New ‘No projection’ option
- Measurements make sense
Migrating from QGIS 2 to 3

Gone!
- Oracle Raster provider
- DXF2SHP plugin
- Most Processing providers
- Old labeling engine

Plugins -> Processing
- GDALTools
- Geometry Snapper
- Heat Map
- Interpolation
- Raster Terrain Analysis
- RoadGraph
- Zonal Stats

Multiple GUI access points

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What's new in QGIS Server?

- Renewed development efforts
- Increased OGC-compliance
- Server-side authentication support
- Refactoring funded by QGIS project
- Used as backend to GeoNode
- Now in unit tests!

demo.qgis.org

OWS config & QGIS Web Client
What's new in QGIS Mobile?

QGIS Web Client 2

QField (opengis.ch)
Migrating Plugins from QGIS 2 to 3

Convert Python using 2to3

- Use 2to3 script in `<QGIS repo>/scripts`
- Native support for Unicode is better in Python 3. Avoid excessive casting like `str(<already unicode>)`

Convert PyQt4 -> PyQt5

- Fix anything not already done by to3
- Avoid: `from PyQt5.QtCore import *`
- Better: `from qgis.QtCore import A, B, C`

Code for QGIS 3 API

- Fine for QGIS3-only plugins

Code for QGIS 2 and 3 APIs

- Requires duplicate code blocks

Code for QGIS 3, run on QGIS 2

- Consider using qgis2compat
- Code using latest API and let plugin manage backwards conversion of API
QGIS Release Schedule

- 2.18
- 3.0
- 3.2
- 3.4
- 3.6

Long Term Release Branch

- FF: 3.0 feature (and API) freeze

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Get Involved!

- Core development
- Sponsor development
- Testing & debugging
- Plugin development
- Documentation
- Translation
- Code sprints
- Education
QGIS Training & Literature

[Image of various books and a computer screen displaying a QGIS interface]

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