Beyond Qt 6.8

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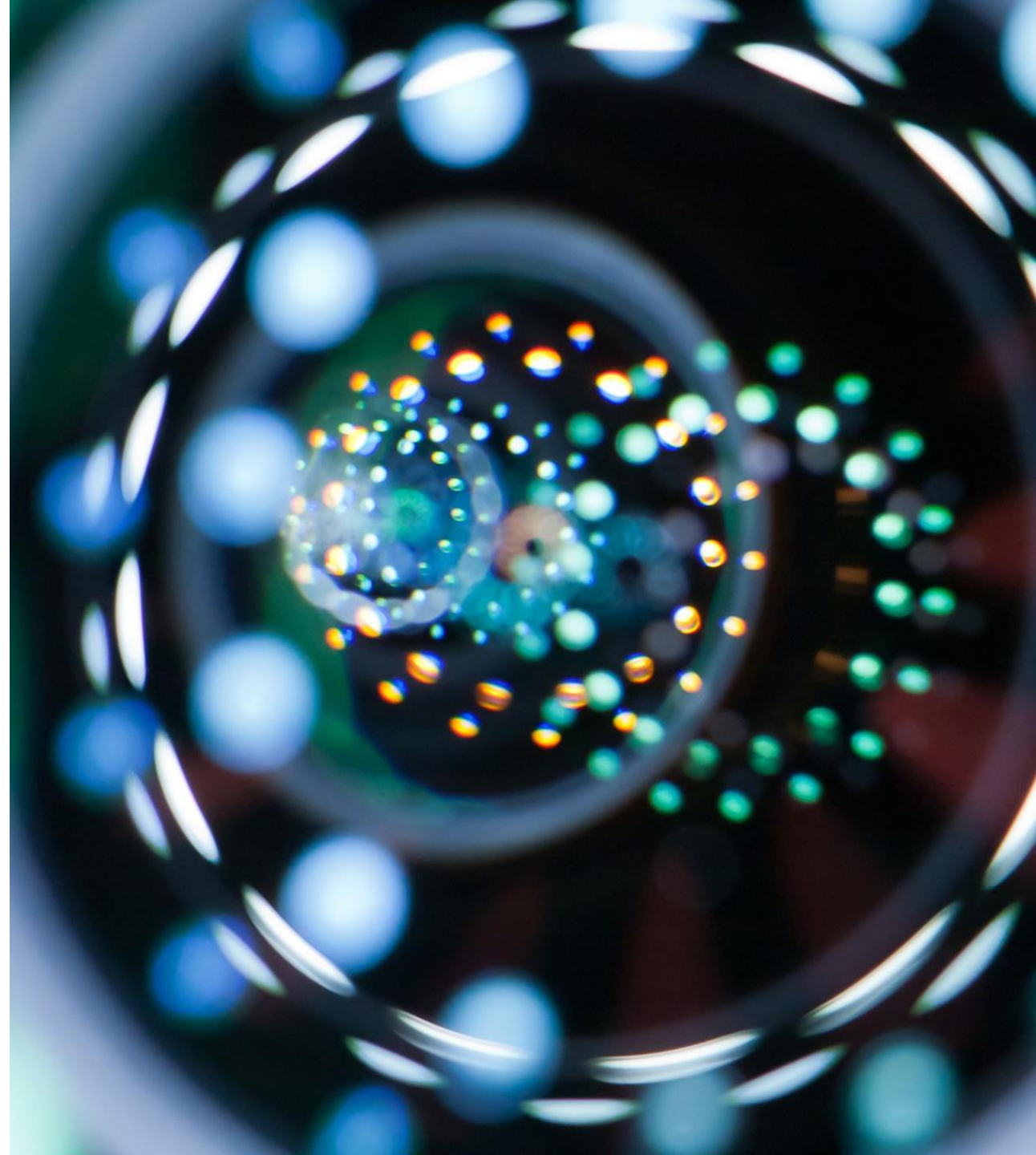
Chief Maintainer in the Qt Project

KDE Akademy 2024

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6.8 Highlights

Qt 6.8 Highlights

- General UI improvements
    - Applications can request dark/light mode
    - More control over font selection
    - Better vector graphics & SVG support

- Qt Quick on Desktop
    - Menubar integration on macOS
    - Quick dialogs as toplevel windows
    - Layout improvements for resizable windows
    - TableView interaction features

- Qt Graphs 2D/3D out of tech preview

- Qt GRPC/Protobuf/HttpServer
    - out of tech-preview

- Qt Multimedia
    - Support for programmatic I/O
    - Experimental support for screen capturing on Wayland
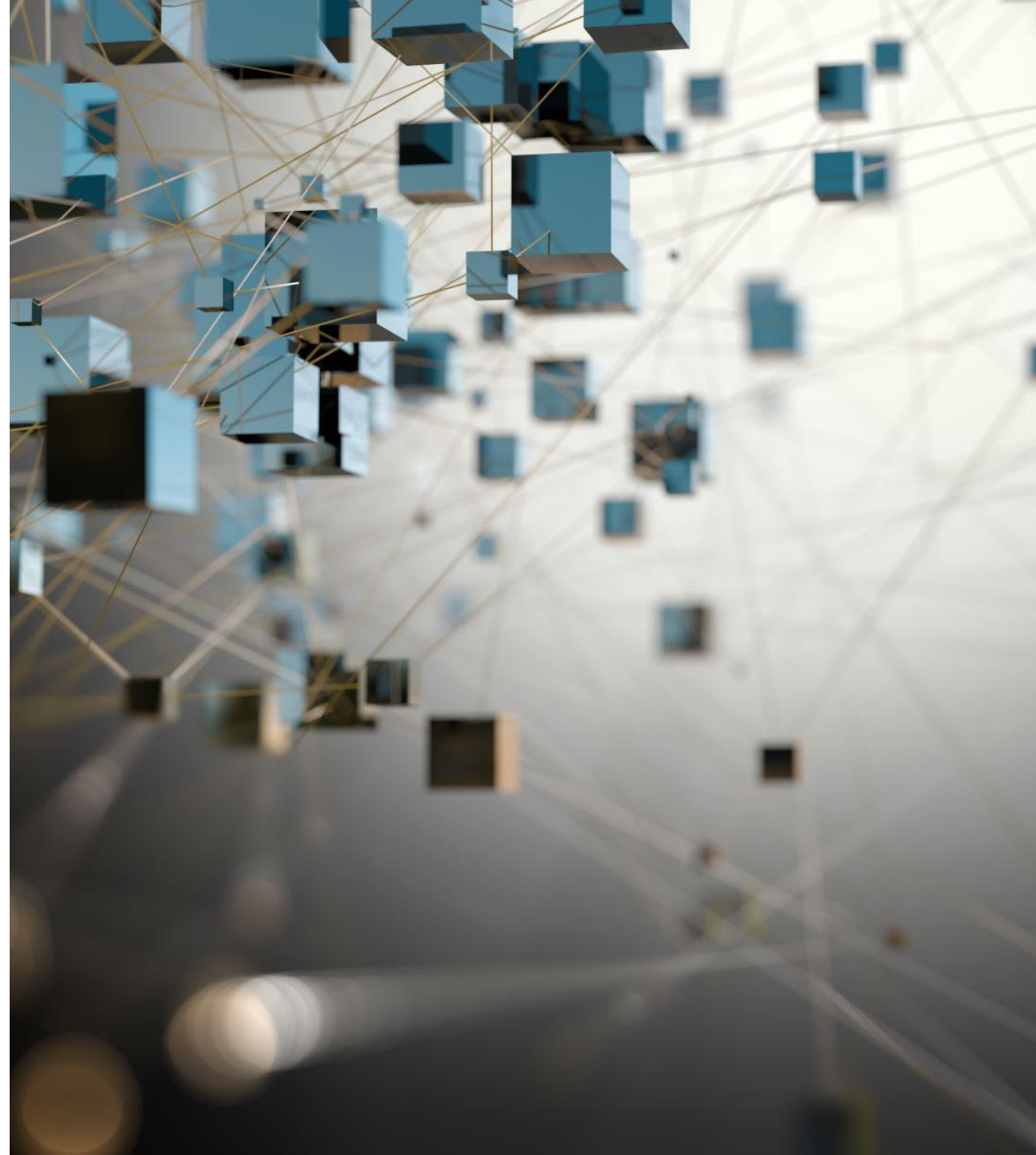
Beyond Qt 6.8

August 2024

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Open Framework

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Open Framework

1. Qt Quick and QML for everyone
   - Building Qt Quick UIs for applications written in C#, Java, Rust, Swift, …

2. Hybrid UI Development
   - Use UI elements from other frameworks inside Qt Quick
   - Use Qt Quick inside Qt Widgets applications
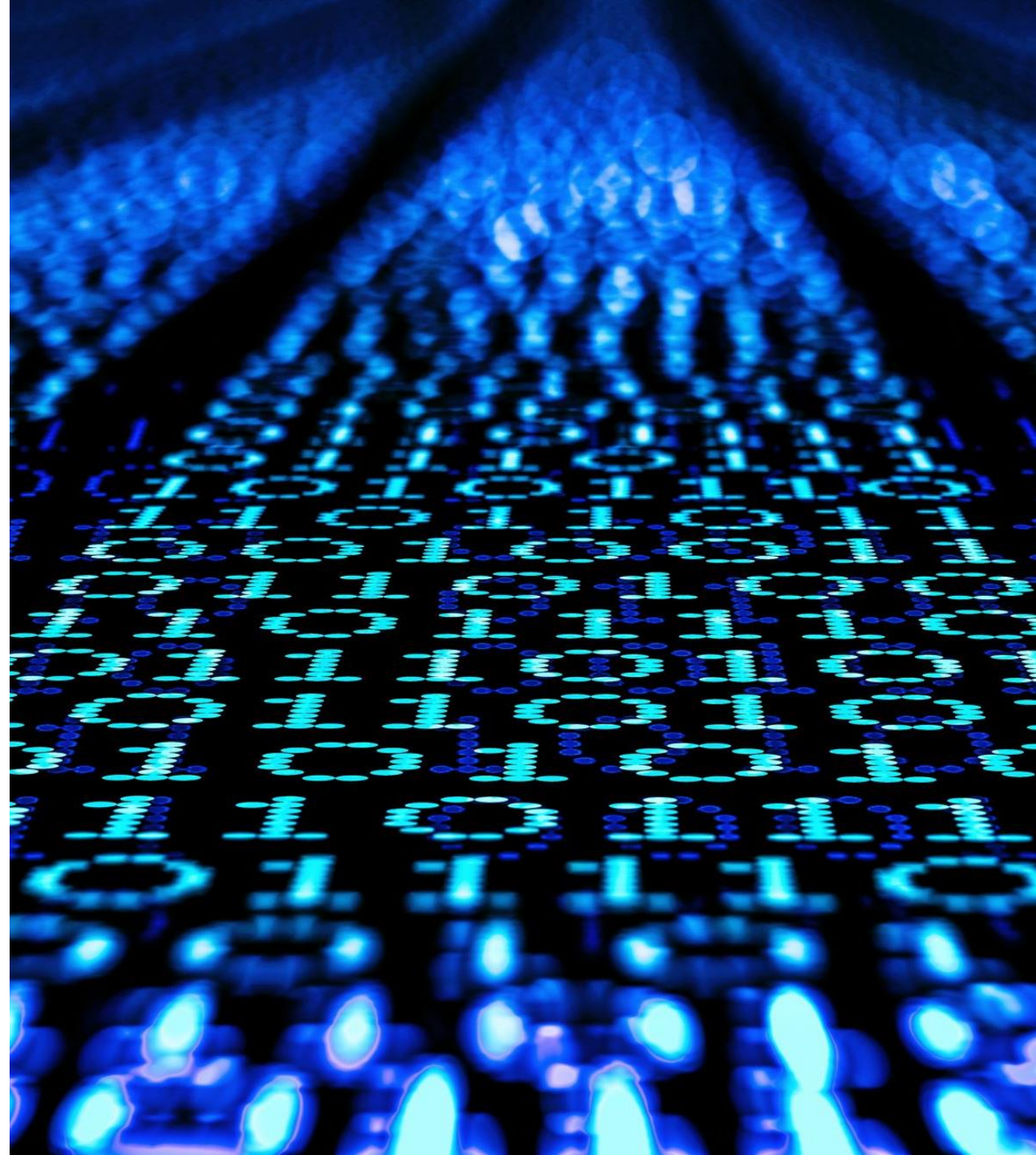   - Use Qt Quick inside native applications (e.g. Android, .Net)

Computing Fragmentation

Computing Fragmentation

1. **Hardware architecture and OS**
   - Windows on Arm, Linux on Arm
   - Support as targets, and as development hosts
   - Regional developments in e.g. APAC

2. **XR**
   - Entirely new computing experience
   - But not entirely different, different immersion levels
   - New interaction models (gestures, voice-assisted, special anchoring, locomotion)

3. **Distributed Software Systems**
   - Applications interacting with each other on desktop, mobile
   - Distributed computing, cloud backends, AI services

Cyber Resilience Act

Cyber Resilience Act

1. Software Bill of Materials (SBOM)
   - Generated by the Qt build system
   - Depends on correct license tagging (SDPX), attribution files

2. Identify and tag code involved in data processing
   - Potential attack vector in case of vulnerabilities
   - Integrate with tooling (e.g. code review, fuzz-tests, static analysis)

3. Account life-cycle for Qt Contributors

Ecosystem & Community

Ecosystem & Community

1. Educational programs
   - Educational licensing
   - C++ and Qt on curriculums of Schools and Universities

2. Engaging with Open Source projects
   - Build network, gain insights and perspective
   - Make it easy to discover and use existing solutions

Productive & Fun

Productive & Fun: Graphics & UI

1. Graphics
   - Vector animations
   - HDR support
   - Hardware accelerated 2D-painting API

2. User Interfaces
   - Transparency effects for windows
   - Qt content in title bars
   - Docking functionality in Qt Quick
   - Unified styling architecture for Widgets and Quick

Productive & Fun: Core and Non-Visual

1. Core and Network
   - Connectivity
   - Libstdex
   - Push notifications
   - Asynchronous I/O
   - File access on cloud storage

2. QML Language
   - Bi-directional bindings
   - Improvements to the type system

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Productive & Fun: Developer & Designer Experience

1. Tooling
   - Improvements to QML Language Server
   - Investigate AI technologies, e.g. LLM for QML, Qt Quick

2. Documentation and Academy content
   - Sharing experiences, best practices
   - Different content formats to reach different demographies

Productive & Fun

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Q&A