GammaRay

Volker Krause
volker.krause@kdab.com
@VolkerKrause
What is GammaRay?

Runtime introspection for Qt applications
How do I use GammaRay?

<insert live demo here>
• GammaRay probe must match target Qt ABI
• Usually requires a self-compiled GammaRay
What can I do with GammaRay?

<insert more live demo here>
• Signals not being emitted, or emitted too often
• Non-unique connections
• Monitor signal emissions
• Trigger signal emissions
• Inspect existing connections
• Events don't reach the desired Item
• Invisible but active Items
Qt Quick 2 Event Handling

- Inspect item hierarchy
- Item picking
- Live property editing
• Unbatched elements
• Batches with unmerged elements
canMerge = (g->drawingMode() == GL_TRIANGLES || g->drawingMode() == 
&& b->positionAttribute >= 0 
&& g->indexType() == GL_UNSIGNED_SHORT 
&& (flags & (QSGMaterial::CustomCompileStep | QSGMaterial_FullMatrix)) == 0 
&& ((flags & QSGMaterial::RequiresFullMatrixExceptTranslate) == 0 
  || b->isTranslateOnlyToRoot()) 
&& b->isSafeToBatch();
Qt Quick 2 Scene Graph

- Inspect scene graph
- Live editing of transformations
- Runtime enabling of Qt debug output
Widget Layouting

- Widget picking
- Layout overlay
- Live property editor
• Widget picking
• Per widget paint analysis
State Machines

- State machine visualization
- Live display of state machine configuration
• Buffer inspection
• Geometry visualization
• Control over backface culling
• Normal vector visualization
Where do I get GammaRay?

- http://www.kdab.com/gammaray/
- Dual license: GPL/commercial
- Part of Qt Automotive Suite
Questions?