



Working on Krita:Fun&Profit

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- Who I am
 - Alumnus of VŠB-TU Ostrava, Czech Republic
- How did I get involved in Krita
 - GSoC 2008: Sumi-e brush engine
 - GSoC 2009: 3D Brush for Krita
 - Master Thesis: Brush Painting in 2D Raster graphics
- Community sponsored developer



What is Krita

- Krita is a KDE program:
 - sketching and painting,
 - creating digital painting files from scratch
 - concept art, creation of comics and textures for rendering.
- to be both a painting application and a photo editor is hard:
 - UI problems
 - Human resources
 - Do the things really good
 - Still small support for photo manipulations



What I'm working on

- Brush engines
 - Hairy brush
 - Spray brush
 - Soft brush
 - Deform brush
 - Particle brush
 - Sketch brush
 - Hatching brush
 - And some more...



What I have to work on

- Action plan I,II
 - User readiness
 - e.g. supporting abr brushes
 - Performance
 - Valgrind, QTest Framework: Benchmarks
 - Unit performance benchmarking
 - 12x faster smudge, pixel iterators 6x faster,
 - 6x faster painting, vectorization effort
 - Usability
 - UI improvements
 - Bugs

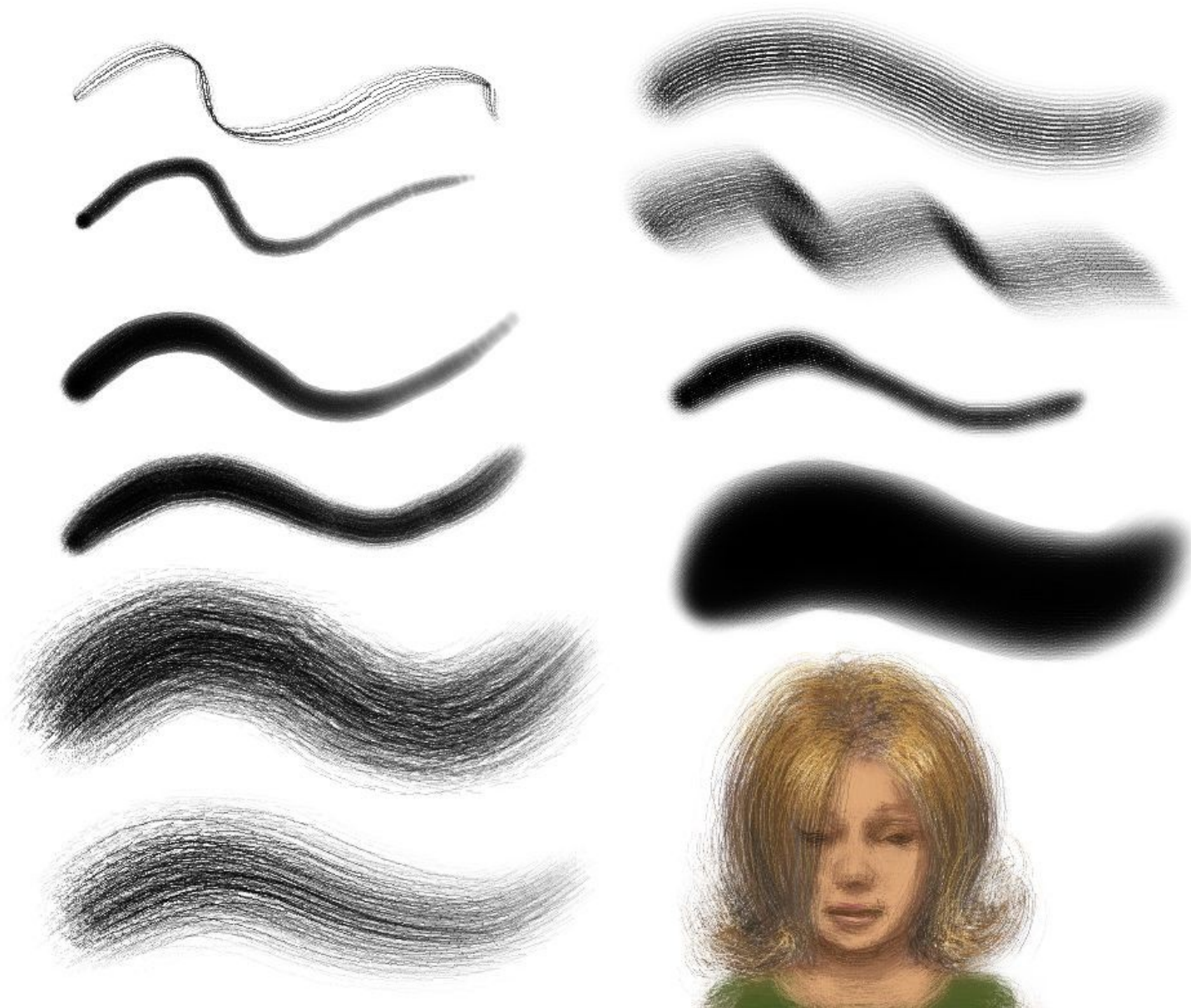


What is brush engine?

- Defines painting operation
 - Define how the stroke will look like
 - Lines or footprints
- In GIMP tools (airbrush, pixel brush, duplicate tool)
- In Krita brush engines (spray, pixel brush, duplicate)
- MyPaint has one big brush engine
 - <http://mypaint.intilinux.com/>



Demonstration



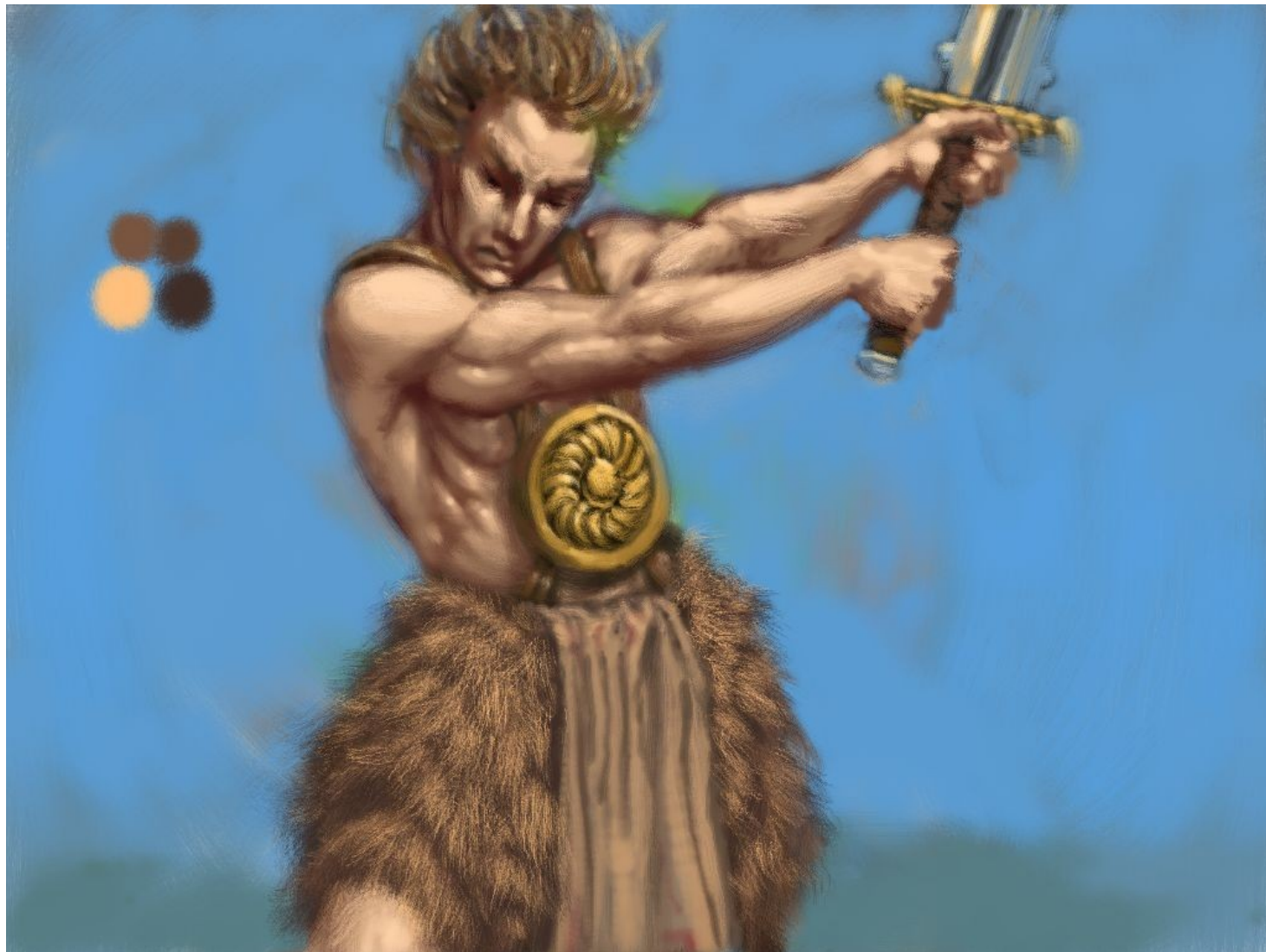
**Samy
Lunge**



David Revoy



Samy Lunge - Fur





David Revoy Angel



Samy Lunge - Rain

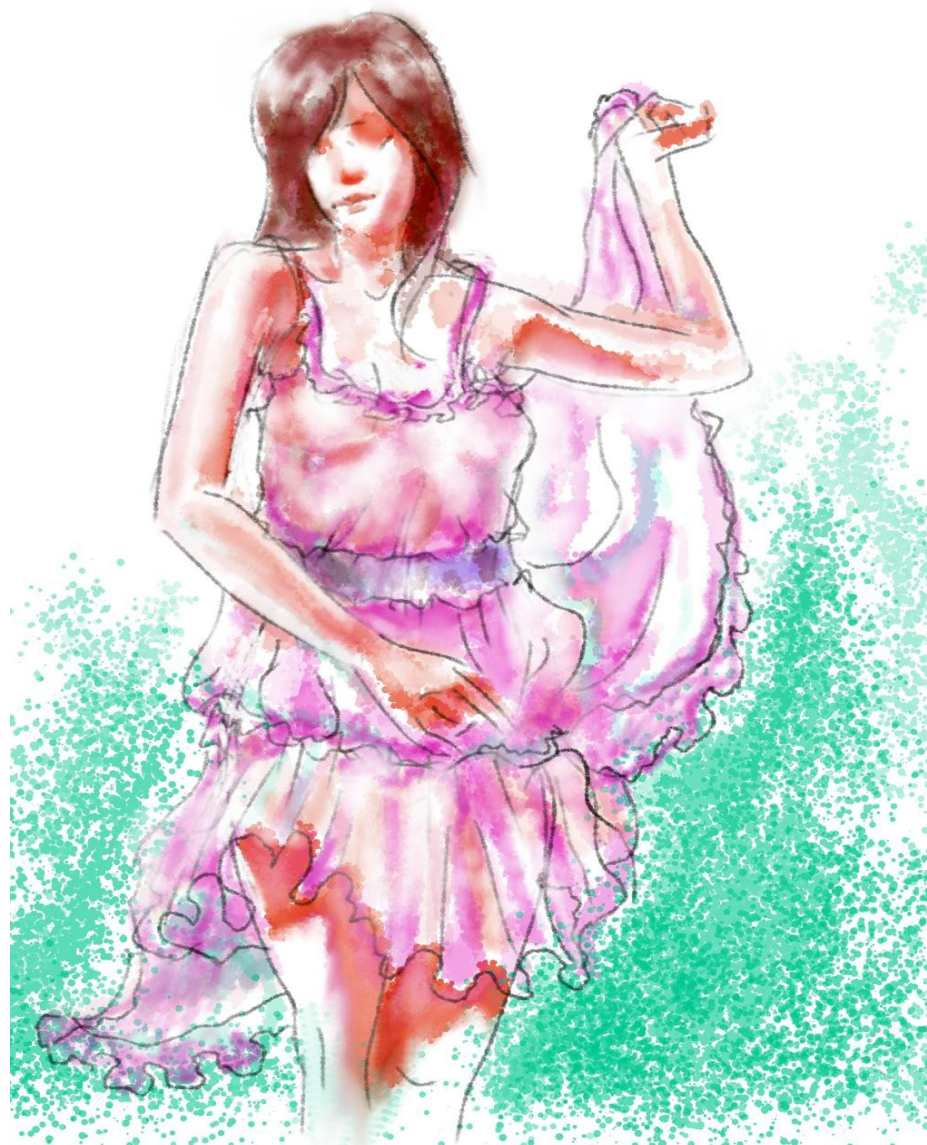


Samy Lunge – Sumi-e style

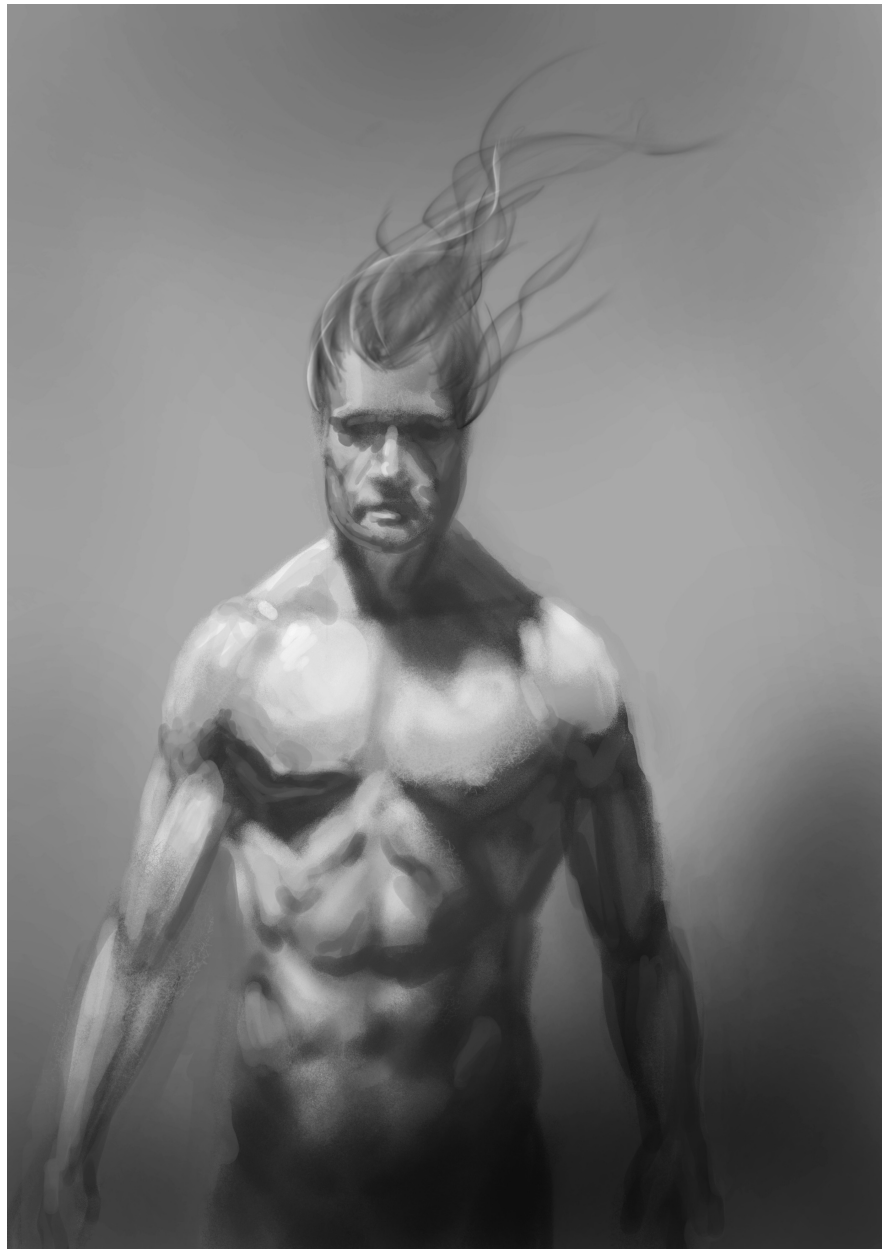




Samy Lunge Tree



Przemek Golab Watercolor



Przemek Golab Hairs



David Revoy Times



David Revoy – Charcoal test





How to write a brush engine

- Plug-ins
- Have an idea, invent a new algorithm
- `KisPaintOp::paintAt()` || `KisPaintOp::paintLine()`
- Access to the pixel buffer through `KisPainter`, `bitBlit` pixel buffer
- `libbrush`, `libpaintop`
 - Support for ABR, GBR, GIH
 - GUI options
- Serialize the brush settings



Do you want to join us?

- Algorithms for image processing or
- Graphics effects or
- Physical simulations of liquids or
- UI designer or
- or you like to play...
- How to join <http://bit.ly/df55e3>



Contact

- My blog
 - <http://lukast.mediablog.sk/log>
- Official website
 - <http://www.krita.org>
- Official forum
 - <http://forum.kde.org/krita>
- IRC Channel
 - #krita at freenode



Questions?

