



Renderfarm.fi:

Making movies with a screensaver



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Laurea UAS





- Laurea operates actively in the R&D project and its international cooperation network includes 180 institutions around the world. Laurea has around 650 personnel and 8 000 students.
- Laurea offers Master's degrees, among others, in the fields of ICT and Business Management (specifically in Service Innovation and Design). The Service Innovation and Design program, operated uniquely by Laurea UAS in Finland, offers the SCI-BUS project access to design oriented service specialists.



# The Problem

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- Rendering – the process of generating 3D images and animations - has always remained a computing intensive task, limiting small companies and artistic endeavours of individual people.
- Even a shorter animation would be highly expensive to render with a centralized, dedicated renderfarm.





# Introducing Renderfarm.fi

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- Idea born from an interview of Samuli Torssonen covering the making of Star Wreck: In the Pirkinning
- Currently 95% Open Source, back-end mostly the work of Danish programmer Janus Kristensen (BURP started back in 2004), front-end rewrite at Laurea UAS
- Directly usable from within Blender, the world's most popular open source 3D suite (just enable the add-on)



## A Case Example

### Animation 759: "Weird Architecture (by M. Geissinger)"



Average computer: 138 days



Renderfarm.fi: 1 day 13 hours



## A Case Example

### Animation 2240: "Robotcomplete (by ludopencil)"



Average computer: 1609 days 6 hours



Renderfarm.fi: 14 days 8 hours



# Accessibility and confidentiality

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Designer

Easy to join with the screensaver

Volunteer



Architect

Volunteer



Moviemaker

Volunteer



Easy to use with the uploader







- We do publicly distributed rendering (sometimes we refer to this as "open rendering")
- We cannot and do not secure your models or textures.
- Why? Because open rendering is achieved through volunteer computing. Would you be willing to donate if you didn't know what's happening on your computer?
- Open rendering is great for advertisements, student works, indie movies ... you name it!
- Important to keep in mind: You maintain all copyright!





## Things we cannot currently do include:

- Any physics that cannot be included ready baked into the .blend file (smoke's an example, almost supported)
- Over 300MB sessions (library support coming)
- Proprietary render engines?
- Automatic work acceptance (security issues)



- Improve and industrialize the workflow, add support for things like smoke and fluid sims
- Focus on the architecture to stabilize and increase security, performance and maintainability (VMs!)
- Benchmark against real studio cases / open movies (our sister project BURP is actually already rendering Big Buck Bunny in 3D, 60FPS, HDR, 4K)
- Establish partnerships with existing communities (tutorials sites, communities established around rendering engines, movies, etc.)





# The Developers

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Julius Tuomisto, Finland  
(CEO, Sales and Community)



Janus Kristensen, Denmark  
(BURP Head Developer)



Janne Karhu, Finland  
(Blender Core Developer)



Jesse Kaukonen, Finland  
(Renderfarm.fi Developer)



Nathan Letwory, Netherlands  
(Blender Core Developer)



## Looking for More Developers

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Wish to join the BURP & Renderfarm.fi crew?





Free rendering by the people for the people