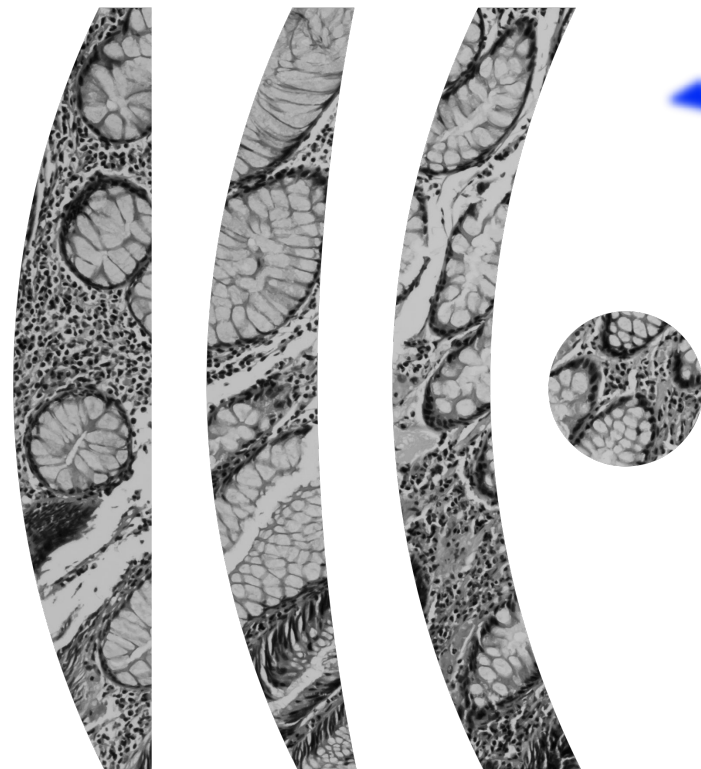


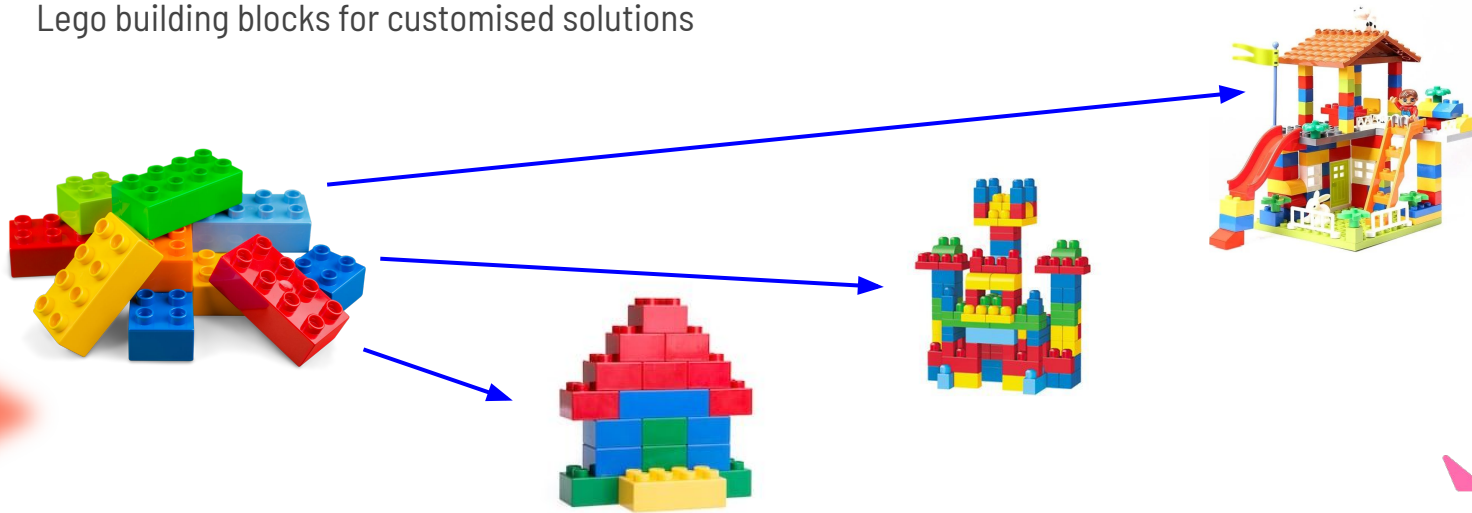
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VIRTUM Technology



VIRTUM Technology - what is it?

- + **VIRTUM Technology is a solution accelerator, not a product!**
- + Cloud-based modular platform for storage, management, sharing, annotating, analysis and processing of large volumes of images
- + Lego building blocks for customised solutions



VIRTUM Technology - solution accelerator

- + Cloud-based for unlimited storage and computational resources
- + Data viewer - pyramidal viewer allows to smoothly display even huge images
- + Data management & sharing - images can be accessed and processed in a collaboration and by a distributed team
- + Annotating - set of highly efficient and user-friendly tools (touch screen are supported!)
- + Processing & analysis - simple API for algorithm integration
- + Virtually any kind of image data format can be supported (e.g. medical, satellite, 3D)
- + Modularity - customized building blocks



VIRTUM Technology - pitch line

- + As a solution accelerator, Virtum can be used to build customised software for clients
- + Various Virtum modules and libraries can be used as a starting point (additional features can be added)
- + Client's application can be adjusted in terms UI
- + Client saves time and \$
- + Could be also a great tool for building and annotating datasets



VIRTUM Technology - origins

- + It all started in 2012 MIT received funding from seed fund "EIT+ Accelerator" for software development for digital histopathology
- + Around 2015 the funding from "EIT+ Accelerator" ended and the works on the Virtum slowed down, but there were a few commercial projects, where Virtum was used and therefore further developed
- + In 2019 we started ExaMode grant with funding dedicated to Virtum development for Histopathology



VIRTUM Technology - Tech Stack

Backend

- + Python
- + Flask
- + MongoDB

Frontend

- + Qt/QML
- + C++
- + Boost

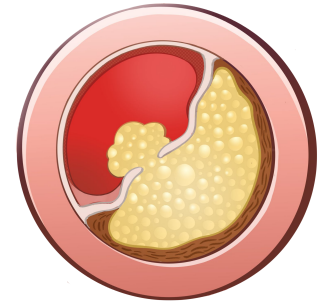
VIRTUM Technology - case studies



+ Fortissimo

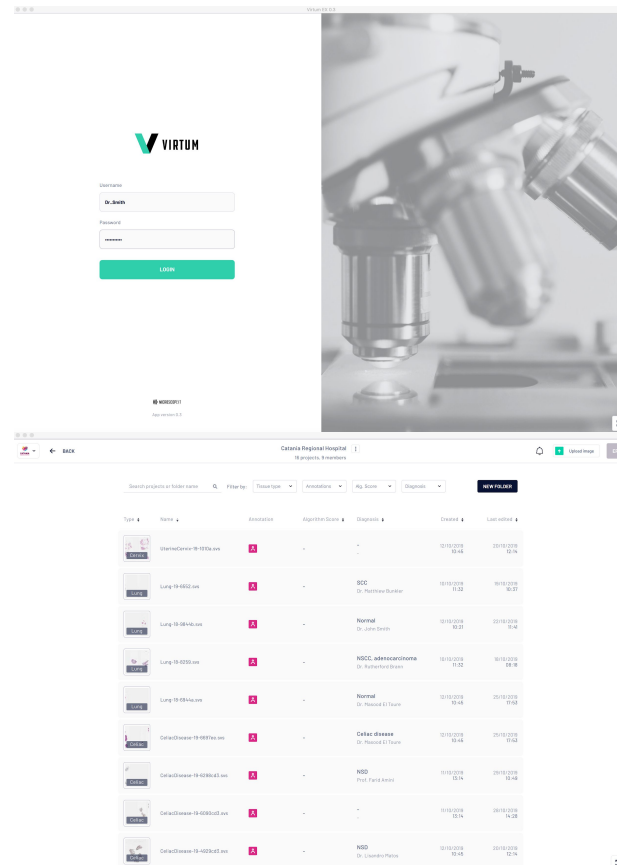
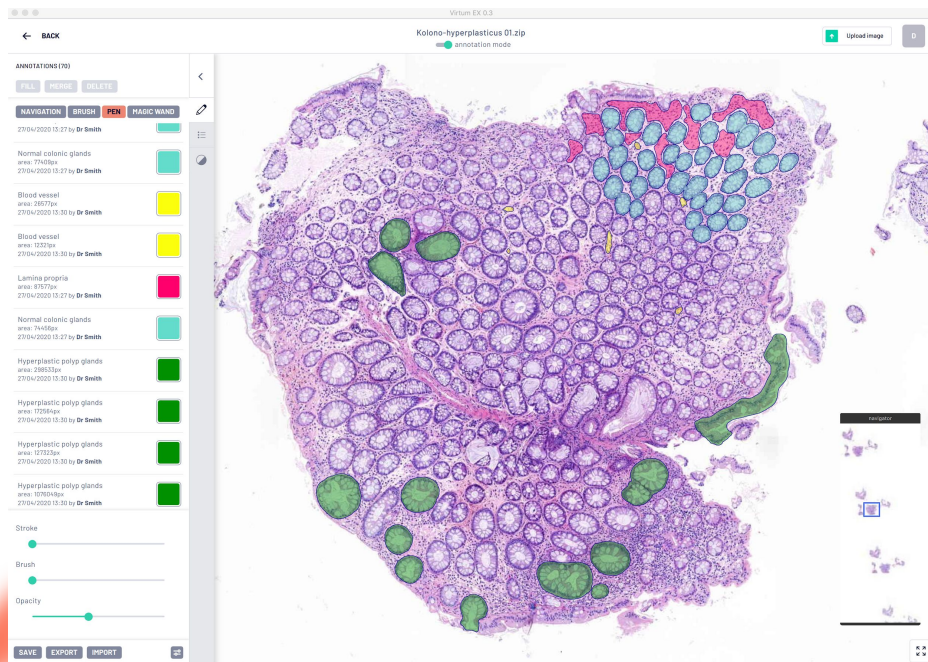
+ EAWAG

+ CLB



VIRTUM Technology

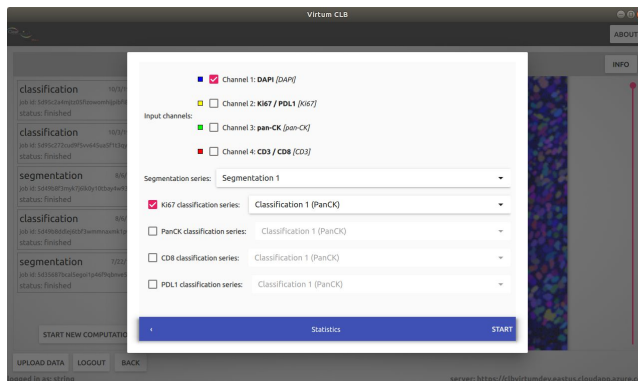
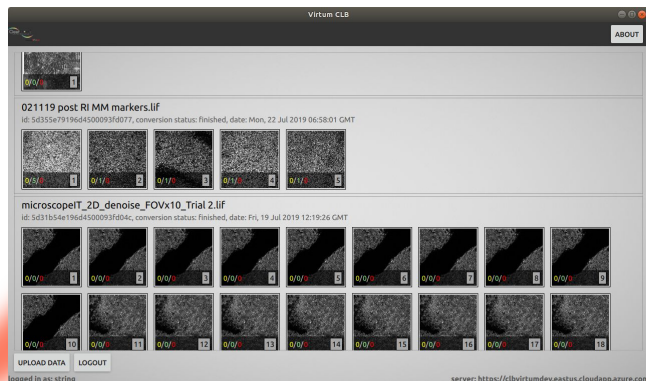
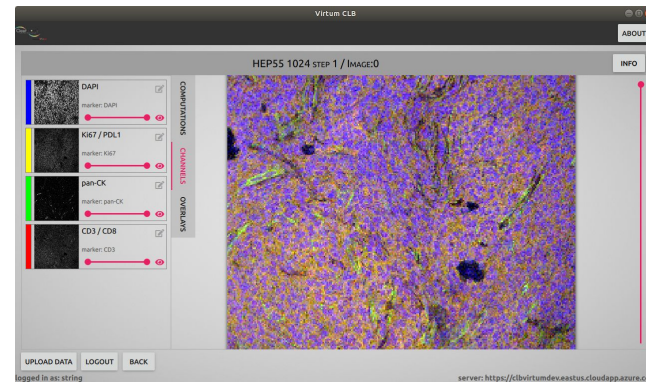
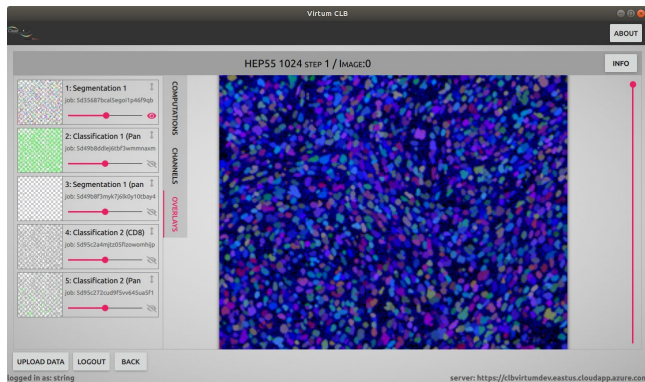
ExaMode / digital histopathology use case



VIRTUM Technology

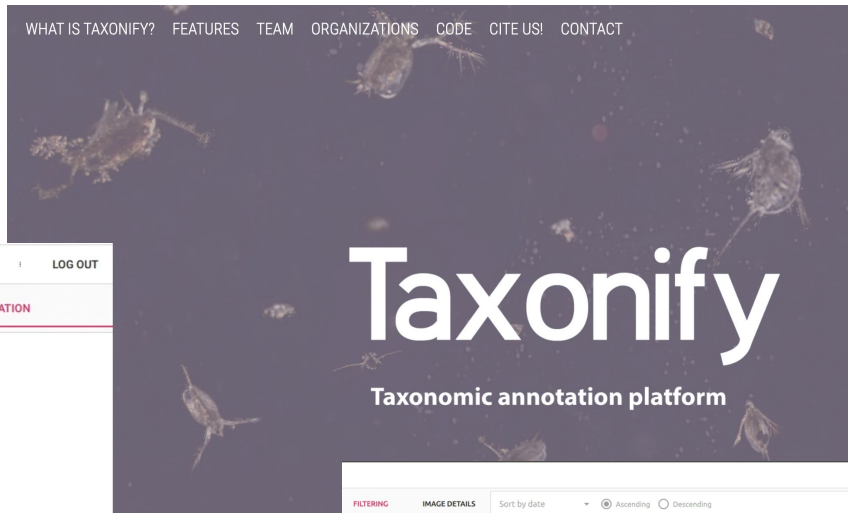


CLB / 3D data



VIRTUM Technology

EAWAG/Aquascope use case



You are signed in as: aquascopeuser EXPORT UPLOAD DATA LOG OUT

ANNOTATION

- Taxonomy
- With eggs
- Dividing
- Dead
- With epibiont
- With parasite
- Broken

Taxonomy

- Prokaryota
- Bacteria
- Cyanobacteria
- Cyanophyceae
- Oscillatoriales

FILTERING IMAGE DETAILS Sort by date Ascending Descending

Taps

grefensee

input tag

Modified by

alice

File name

Acquisition Time

Modification Time

Start time: 18/03/2019 00:00

End time: 21/03/2019 06:00

Taxonomy

- Eukaryota
- Animalia



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Let's talk!

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