Virtual microscope

The virtual microscope operating online provides an efficient solution for storing, sharing and analyzing whole slide images.

WebMicroscope® is a web- and cloud-based online microscope service, which can be used on all browsers, tablets and smartphones. It provides an efficient image server and web user interface that allows pathologists, researches, and students to handle and analyze gigantic images of tissue sections.

Large images of microscope specimens are huge files, which take up a lot of space, and it is difficult to process them. Efficient compression algorithm in the WebMicroscope platform leads to substantial savings in storage space and cost, as well as to fast image loading on the screen. The Finnish bioinformatics company Fimmic sells the WebMicroscope Software as a cloud service and as a solution installed on premises. The customers have their own web portal, protected with user IDs, or an account in a cloud service.

A traditional microscope can be used to examine only a small part of the sample at a time. The microscope scanner scans the whole sample with a large lens, in which case the entire sample and its details are digitized. The created image can be viewed easily and quickly with the WebMicroscope, regardless of the location. The images are not saved on workstations but instead they are loaded over the internet directly from the image server.

Through the WebMicroscope portal, the user may share their own microscope images with different research groups and cooperation partners all over the world. This is an important feature; in drug discovery and development, for example, sharing test results quickly with research groups and

"There is great need for fast connections and computing power, because the images to be examined are large files, so-called whole slide images. Speed and efficiency are needed so that the analysis does not spend too much time"
(Kaisa Helminen, CEO, Fimmic)

pharmaceutical companies is a prerequisite for breakthroughs.

Fimmic uses the CSC data center cPouta service. It provides WebMicroscope users dedicated high performance servers, fast bandwidth and a great deal of storage space. This ensures that the service will operate as efficiently as possible.

MORE INFORMATION:

Fimmic Oy
Fimmic is committed to developing novel web-based software solutions and versatile user-interfaces to address and solve challenges faced in rapidly evolving field of digital virtual microscopy.
http://www.fimmic.com

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CSC – IT Center for Science Ltd. is a non-profit, state-owned company administered by the Ministry of Education and Culture. CSC maintains and develops the state-owned centralised IT infrastructure.
http://www.csc.fi
https://research.csc.fi/cloud-computing

ELIXIR
Elixir is constructing biological information infrastructure in Europe to support research in the bio field. CSC – IT Center for Science Ltd. is Elixir's node in Finland.
http://www.elixir-finland.org
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