OME Community Supported Formats

Sébastien Besson
Josh Moore
School of Life Sciences
University of Dundee

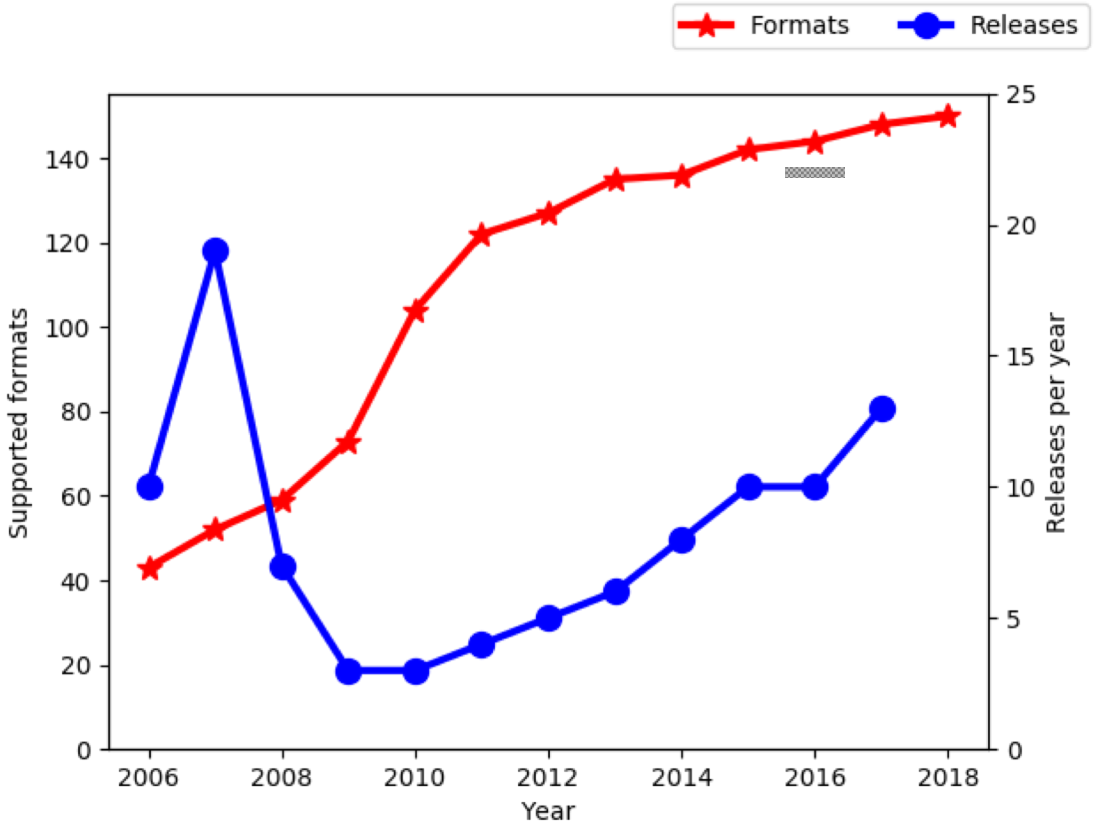
The OME Consortium
openmicroscopy.org
@openmicroscopy

November 8th, 2018

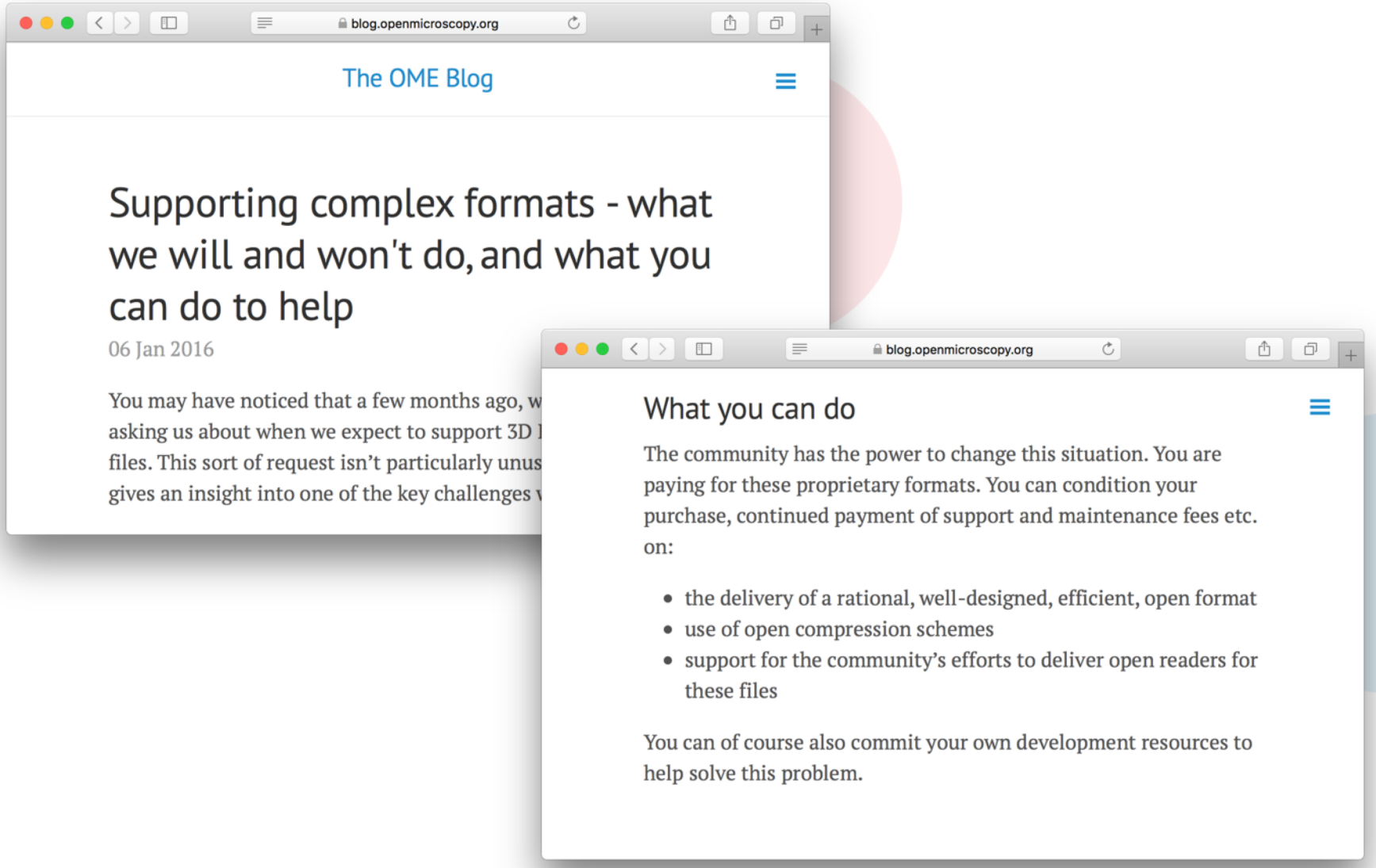
University of Dundee

2006-2016: Support for 140+ file formats

2x or more variants



2016: Public statement about file formats

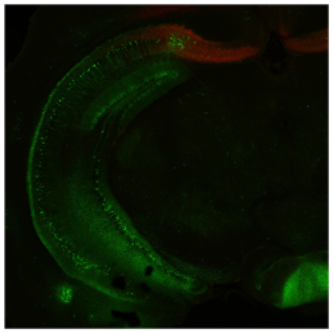


http://blog.openmicroscopy.org/file-formats/community/2016/01/06/format-support/

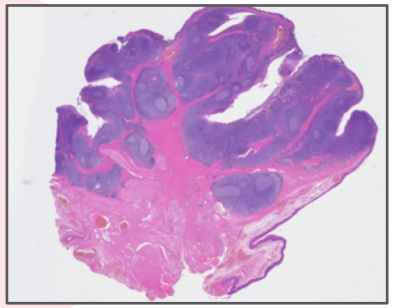
2017/2018: new file formats

Glencoe SOFTWARE

OLYMPUS



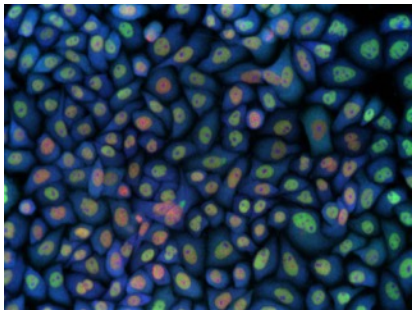
PerkinElmer



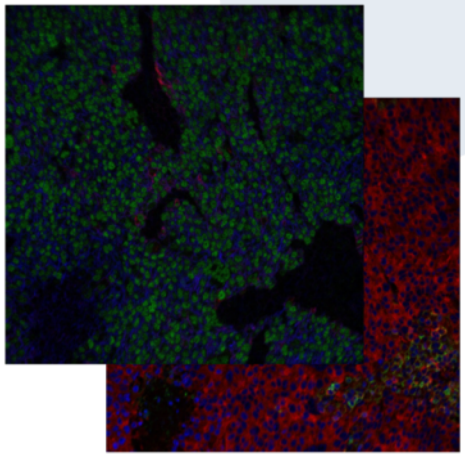
Upcoming

CV7000

BDV, KLB

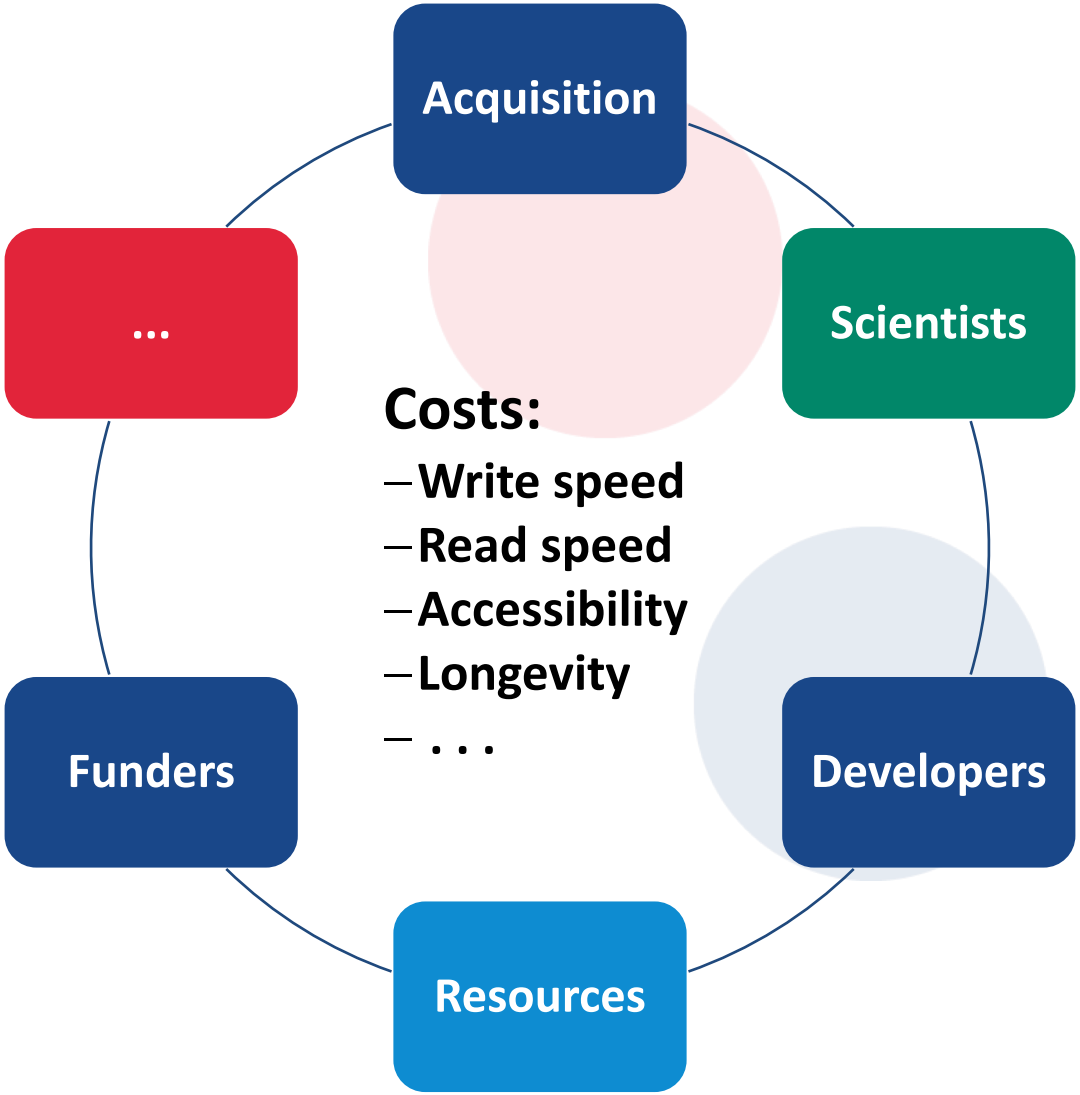


IDR



IONpath

Differing requirements; differing costs

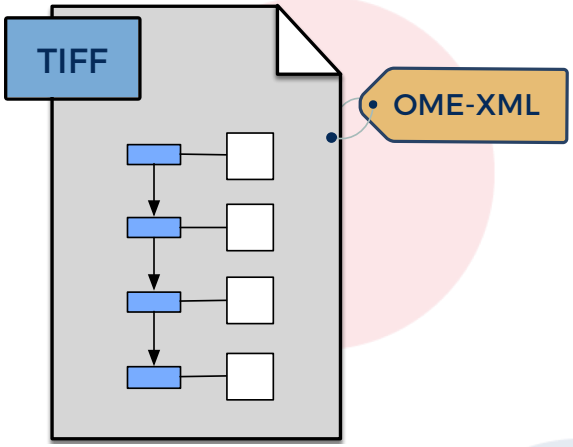


Open file formats for imaging data

Open standards

TIFF: imaging pixel data

OME: imaging metadata



Flexibility

Highly annotated, multi-dimensional datasets

Distribution over multiple TIFF files

Availability

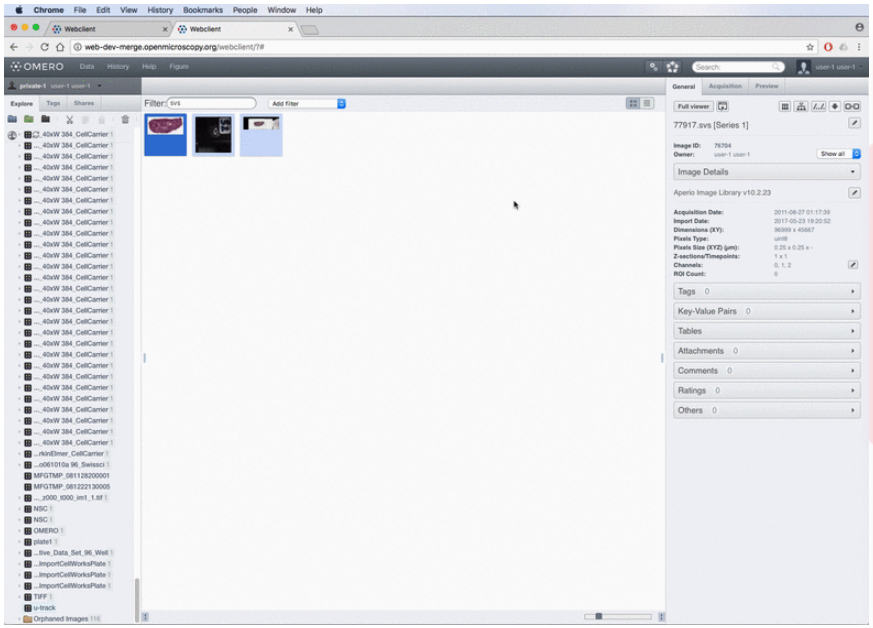
Public specification, examples and reference implementations

Long-term support

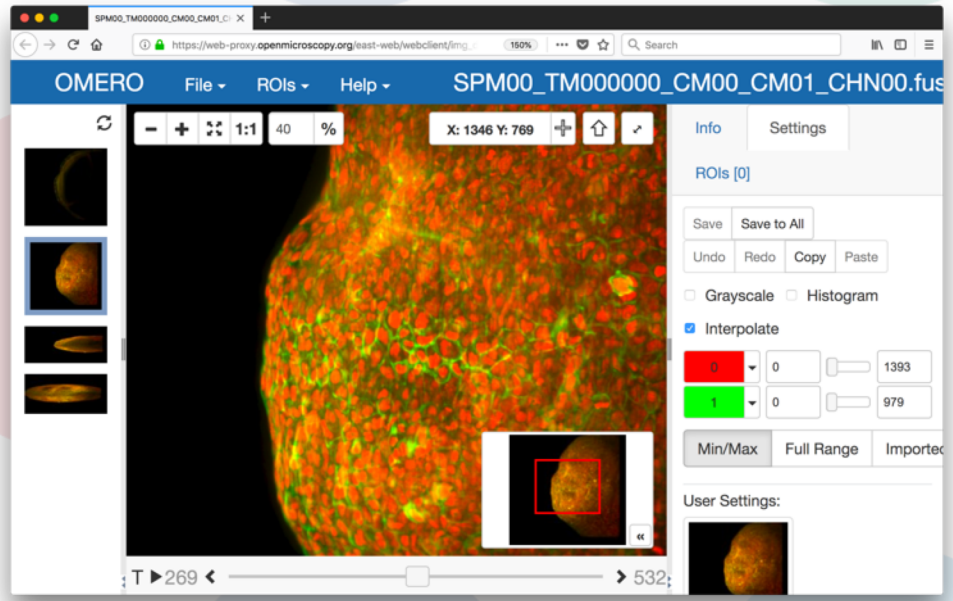
Upgrades and downgrades for each new version of the format

https://docs.openmicroscopy.org/latest/ome-model/ome-tiff/index.html

OME next generation formats

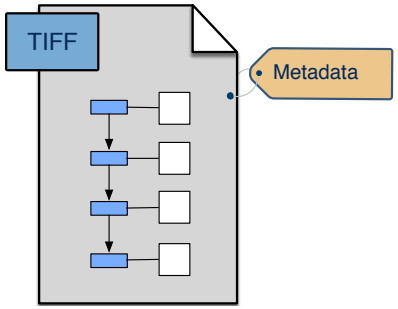


Pyramidal OME-TIFF

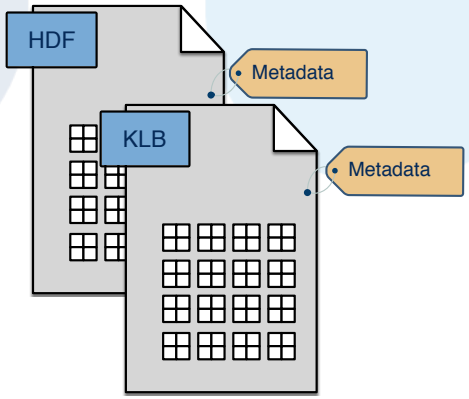


Binary vessels

- TIFF features for storing multi-resolution images
- Specification, readers and writers



- Readers for modern data containers
- Upcoming IDR datasets



Key points

- Data format developers (Industry & Academic)
  - Reduce long-term cost of data formats (variants)
  - Engage with open community formats
- Data format users (Nodes)
  - Ensure long-term viability of data
  - Prioritize (Demand?) support for open community formats
- Proposal: open community formats
  - Readable by reference implementations (Bio-Formats)
  - Defined by community agreements


Questions?

Requirements: for discussion

	Write speed	Read speed	Accessibility	Longevity	. . .
Acquisition					
Users					
Tooling					
Resources					