μManager:
Open Source Software for Microscope Image Acquisition

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Why micro-manager.org?
Started summer 2005 at Vale Lab, UCSF

- Single Interface for all microscopes
- Standard and open plug-in interface
- Choice in hardware
- (Real) extensibility
- Quality
- Cost
μManager features

• Simple user interface to important imaging strategies: Snap Image, Time-lapse, z-series, multi-channel, multi-positions
• Controls many microscope hardware components
• Hardware support can be added by anyone
• Integrated with ImageJ
• Cross-platform (Windows, Mac, Linux)

μManager features(2)

• Open Source
• Modular architecture: Extensible by third parties: at hardware support level and User Interface
• Powerful scripting interface
• Programmatic interfaces to 3rd-party analysis environments such as Matlab enabling analysis driven acquisition
• Free!
Currently Supported Hardware

- **Microscopes:**
  - Nikon: TE2000, TI, AZ100
  - Zeiss: AxioPlan, AxioVert, AxioObserver, AxioImager
  - Olympus: IX81
  - Leica: DMI and DMR series

- **Cameras:**
  - ABSCameras
  - Andor
  - Hamamatsu
  - Roper/Photometrics
  - QImaging
  - dc1394 (firewire)
  - DVC
  - PCO, Breath, Sensicam
  - µManager
  - Spectral LMM5
  - Yokogawa CSU22 and CSUX
  - Pecon environmental control
  - CoolLED
  - Cobolt and Coherent lasers

- **Stages/filter wheels shutters, etc.:**
  - ASI
  - Ludl
  - Prior
  - Sutter
  - Mad City Labs
  - Nikon
  - Conix
  - Physik Instrumente
  - Maerzhauser

- **Communication ports, IO:**
  - Serial, parallel, USB port
  - DTOpenlayer
  - Velleman K8055 and K8061
  - National Instruments

- **Other devices:**
  - Neos AOTF controller
  - Spectral LMMS
  - Yokogawa CSU22 and CSUX
  - Pecon environmental control
  - CoolLED
  - Cobolt and Coherent lasers
Support and Statistics

Website: http://micro-manager.org
Wiki: http://valelab.ucsf.edu/~nico/MMwiki
Source code: https://valelab.ucsf.edu/svn/micromanager2/branches/micromanager1.3
Mailing list: https://lists.sourceforge.net/lists/listinfo/micromanager-general
Support/Help: info@micro-manager.org

>3000 registered users (~150 new users each month)
300 subscribers to the mailing list
Booth at ASCB meeting

Documentation

Website:
- Users’s guide
- Configuration guide
- Programming guide
- API reference

Wiki:
- Scripting interface
- Example scripts
- Programming tips
- Device configuration
- FAQ
Thanks!

Beta-testers:
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Gohta Goshima
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