Towards a Standard for HCS Data Interchange

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The need for a standard

• The customer wants it
  – CHI-HCA Conference Jan 2006
    • Joe Trask’s User report
    • Encourage vendors to have a standard for images and data
• The vendors are supportive
  – CHI-HCA Conference Jan 2006
    • Cellomics encouraged the other vendors to collaborate with us and NIST to establish a standard
      – General agreement
      – Not much action!
• It makes sense
  – Expands the usage/utility of HCS
  – Opens up opportunities for innovative products that leverage the standard
• Plenty of good examples
  – E.g. Flow, Microarray
Proposed Standard

• Standard for Images and Data
  – An image standard *alone* is not enough
    • To analyse an image between different packages need more than just its type and format
      – How acquired
      – Magnification
      – Filters etc
    • Need a standard for data interchange that uses appropriate meta data to describe HCS/HCA images and data
Proposed Standard

• Self describing format of XML proposed
• Embrace and extend two existing standards
  – OME – Open Microscopy Environment
    • http://www.openmicroscopy.org/
  – MIACA – Minimum Information for A Cellular Assay
    • http://miaca.sourceforge.net/
• Action
  – CHI-HCA 2007
    • Draft specification for HCS/HCA Data Interchange
      – MIAHA?
        » Minimum Information for A High Content Assay