



PerkinElmer[®]
For the Better

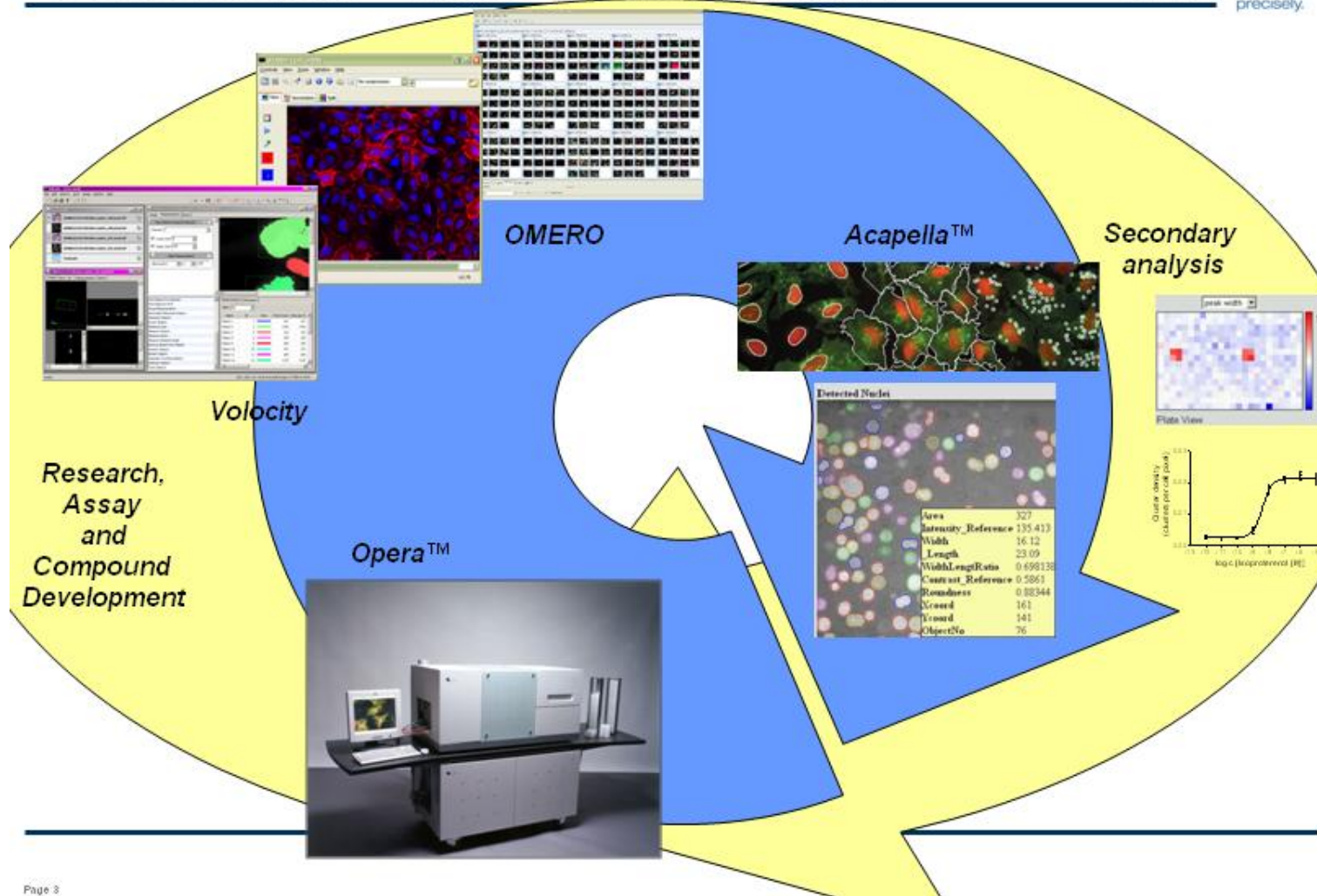
20. May 2009

Columbus HCS Management based on OMERO

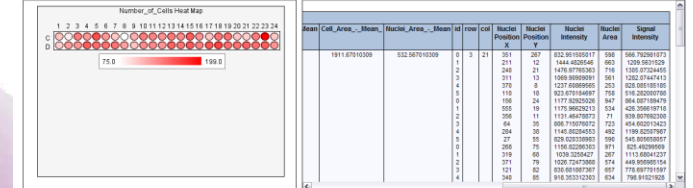
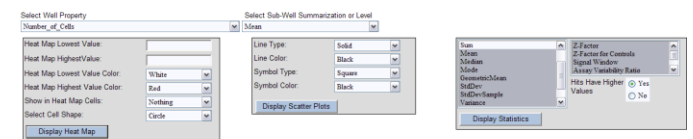
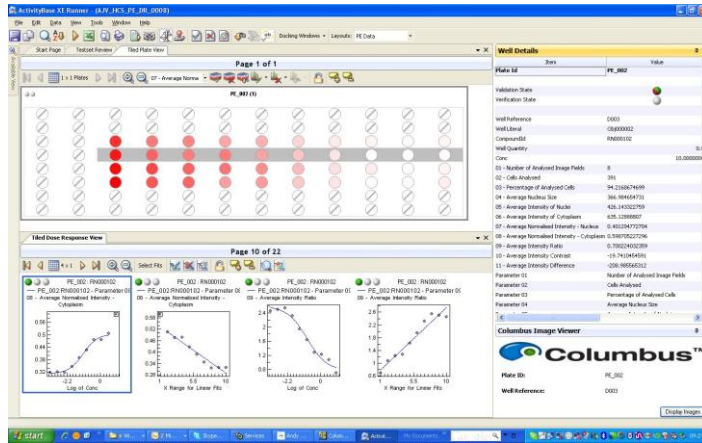
Karsten Kottig, Bernhard Holländer



Columbus: Opera – OMERO – Acapella and more

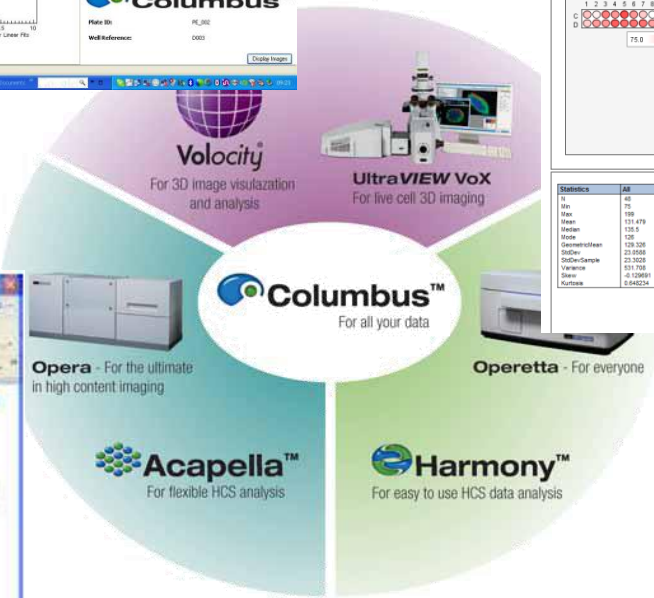
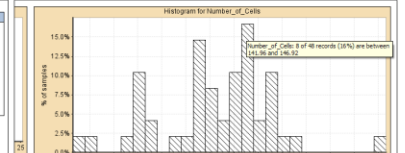






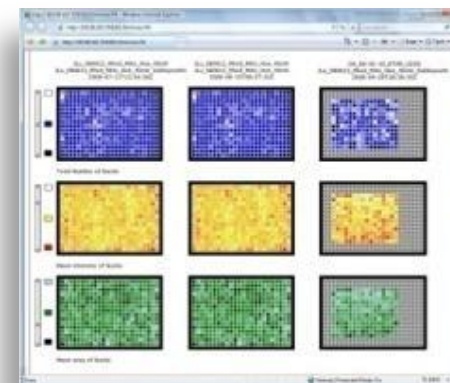
Statistics	All	Samples	Pos/Controls	Neg/Controls
File	45	45	0	0
Mean	133.479	133.479	0	0
Median	126.1	126.1	0	0
Mode	126	126	0	0
Skewness	239.326	239.326	-1.4#D	-1.4#D
Kurtosis	23.3028	23.3028	-1.4#D	-1.4#D
Max	151.758	151.758	-1.4#D	-1.4#D
Min	41.20691	41.20691	-1.4#D	-1.4#D
Stdev	0.84254	0.84254	0	0

Row	Col	Nuclei Area	Mean	Stdev	Row Col	Nuclei Position X	Nuclei Position Y	Nuclei Intensity	Nuclei Area	Signal Intensity
0	3	351	207	832.91103117	0	351	207	832.91103117	680	680.762091373
1	2	211	12	144.4826346	685	1209	50129	1209.50129	1209	1209.50129
2	1	240	21	1476.97918363	716	1336	8724465	1336.8724465	1336	1336.8724465
3	1	311	10	1989.95995959	581	1282	2747415.3	1282.27474153	1282	1282.27474153
4	1	370	8	1237.69899999	253	828	881188186	828.881188186	828	828.881188186
5	1	119	10	823.878164891	758	119	202209780	119.202209780	119	119.202209780
6	1	158	24	1177.92023294	947	864	887188478	864.887188478	864	864.887188478
7	1	85	19	1178.9692621	524	426	268937816	426.268937816	426	426.268937816
8	2	358	11	1171.48478771	71	938	887882308	938.887882308	938	938.887882308
9	2	64	36	898.795897972	723	464	48312421	464.48312421	464	464.48312421
10	2	204	30	1140.82245553	492	1199	82207987	1199.82207987	1199	1199.82207987
11	2	27	85	828.822239993	593	148	890999987	148.890999987	148	148.890999987
12	2	366	75	1160.82202621	971	425	42209998	425.42209998	425	425.42209998
13	2	319	96	1028.32382427	287	1113	158412317	1113.158412317	1113	1113.158412317
14	2	275	78	1021.7217088	574	448	889895154	448.889895154	448	448.889895154
15	2	121	82	838.051887937	678	697	897919197	697.897919197	697	697.897919197
16	2	340	85	916.352912263	634	768	916214183	768.916214183	768	768.916214183



Technology used for Columbus 1.x

Opera Screening Data:
Images (e.g. flex)
Screening Information (e.g. mea)
Results (e.g. res)
But also
Operetta, Arrayscan,
InCell, Discovery-1



Columbus – Interface (Webservice)

OMERO.Insight with
Acapella Server Interface
Plateview



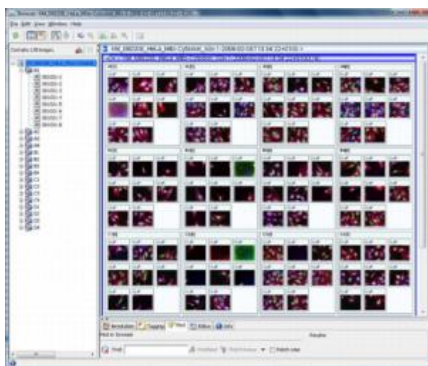
High Content Screening
PDI



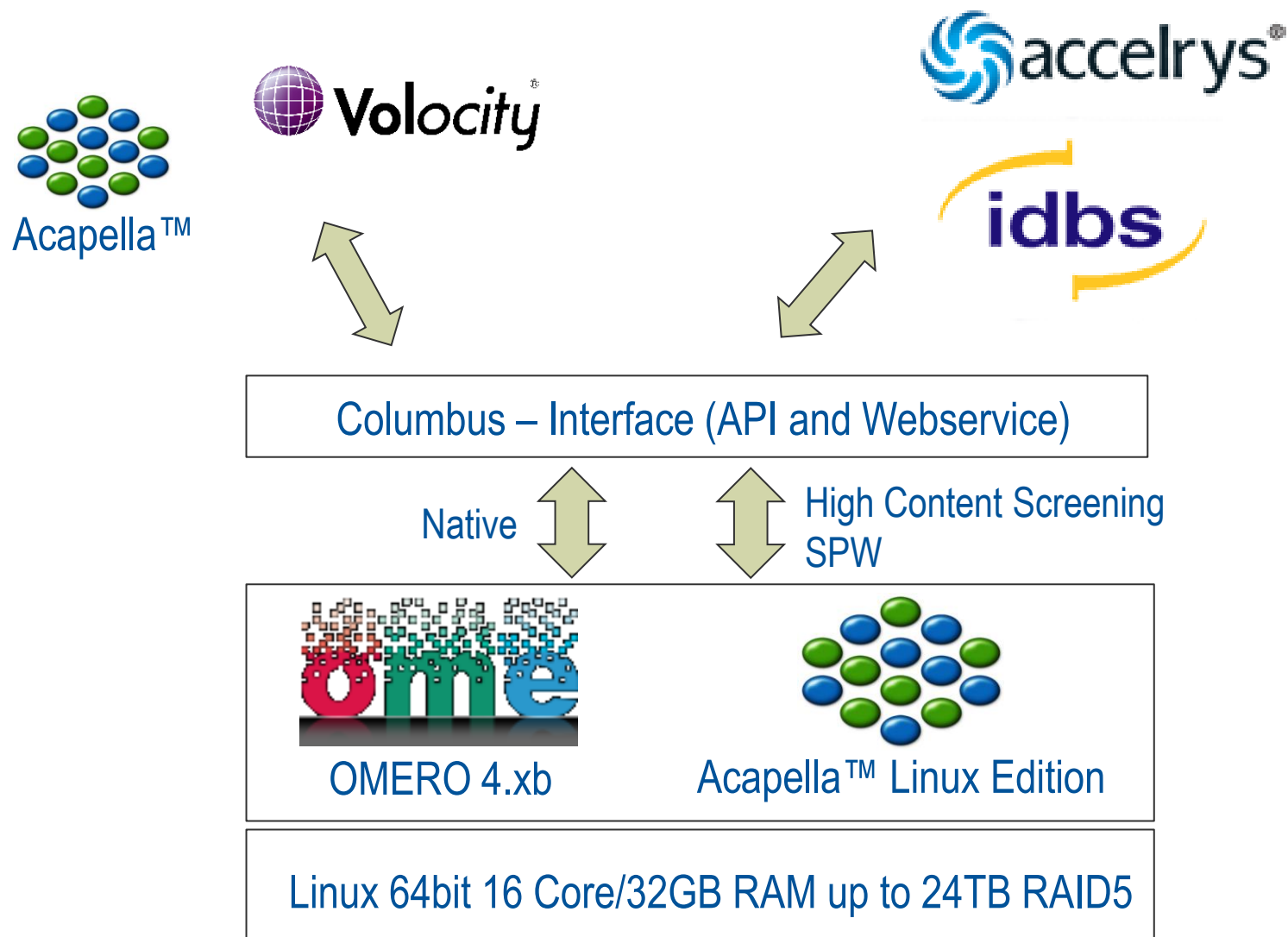
OMERO 2.3b



Acapella™ Linux Edition



Linux 64bit 16 Core/32GB RAM up to 24TB RAID5



Columbus: Needs



Stability

Standardization of Analysis/Results

Results (Plate, Well, Cell), Overlays, Analysis Layout, Analysis Definitions

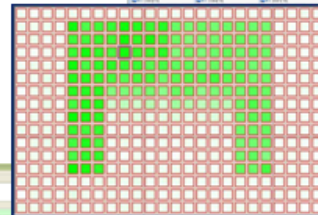
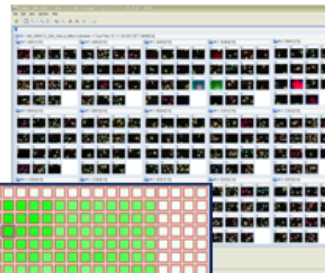
Improvements of Insight/Importer

SPW, Search&Filter, Clear Screenacquisition Selection, Remove ugly crosses, Rendering Settings for Plate, Define annotation download folder, Support all documents as annotations



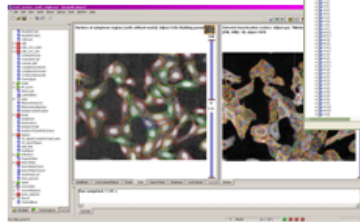
OMERO
Screen, Plate, Well Structure
Result, Overlay Representation for Analysis
Archiving Strategy

OMERO.insight
+ Screen, Plate, Well
Navigation and Selection



OMERO - interface
Web access Interface
To structure and data

(connection to existing
Primary and secondary
Analysis solutions)



OMERO.importer
(BioFormats)
Support of .flex
Well-Image files

Many Thanks To...

PerkinElmer | For the Better

Jason Swedlow
...and the full OME Team



PerkinElmer
Martin Daffertshofer
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Heiki Sonajalg
Michael Heitmann
Steve Baxter

Carus
Matthias Rath
Matthias Dunda

Intel
Andrea Cato
Paul Guermonprez

...and a lot more ...

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