



SWISS TESTING NIGHT 2011

An evening event with Presentation, Apéro and Networking



2. Referat:

Testing Software on the Cloud : Experiences from Ground-Zero

Tim Llewellynn, CEO, nViso SA

TESTING EMOTION SOFTWARE IN THE CLOUD

Presented by

Tim Llewellynn
(CEO & Co-founder)



Presented 9th November 2011

Vistas of Opportunity for Testing



Cloud based testing the promise

- Lower costs and pay per use
- Eliminate cap-ex
- On-demand flexibility
- Enhanced collaboration
- Greater levels of efficiency
- Reduced time to market

From Our Perspective ...

Agenda

- What we do?
- What are our testing challenges?
- How we solved it?
- What didn't work as expected.
- The future and ongoing challenges
- Wrap-up

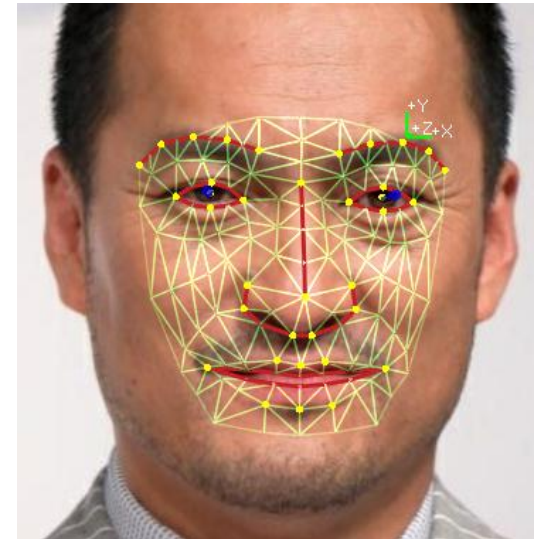
Emotions and Brands!

- Advertising creates "emotional-evolvment" to drive behavioural change and increase sales.
- ... BUT emotions are very difficult to measure



Measuring Emotions Is Difficult

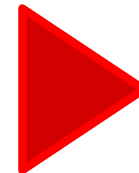
- Status-quo challenged in **scale**, cost, and accuracy



1960

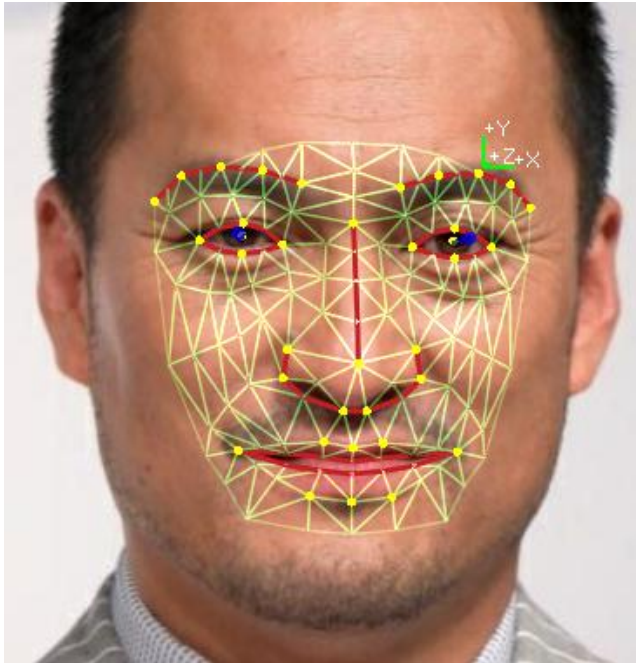


2000

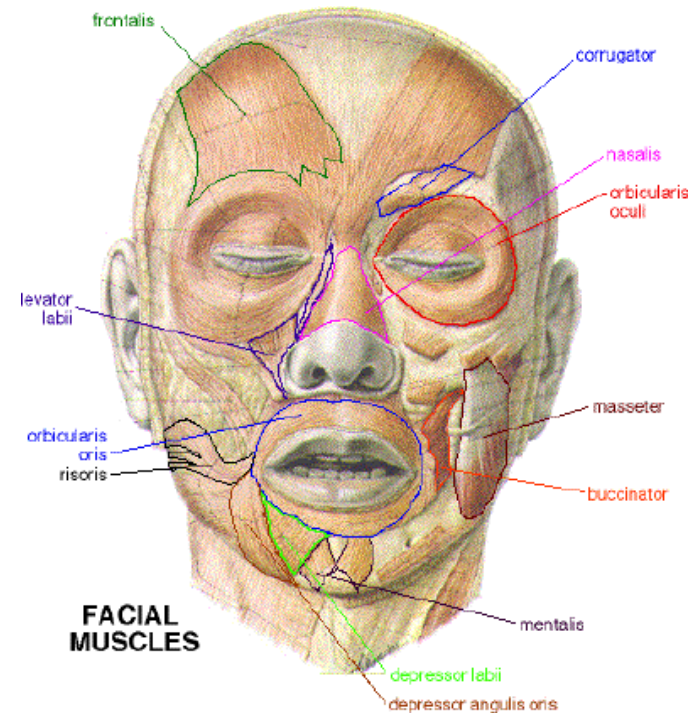


2010

3D Facial Imaging Technology



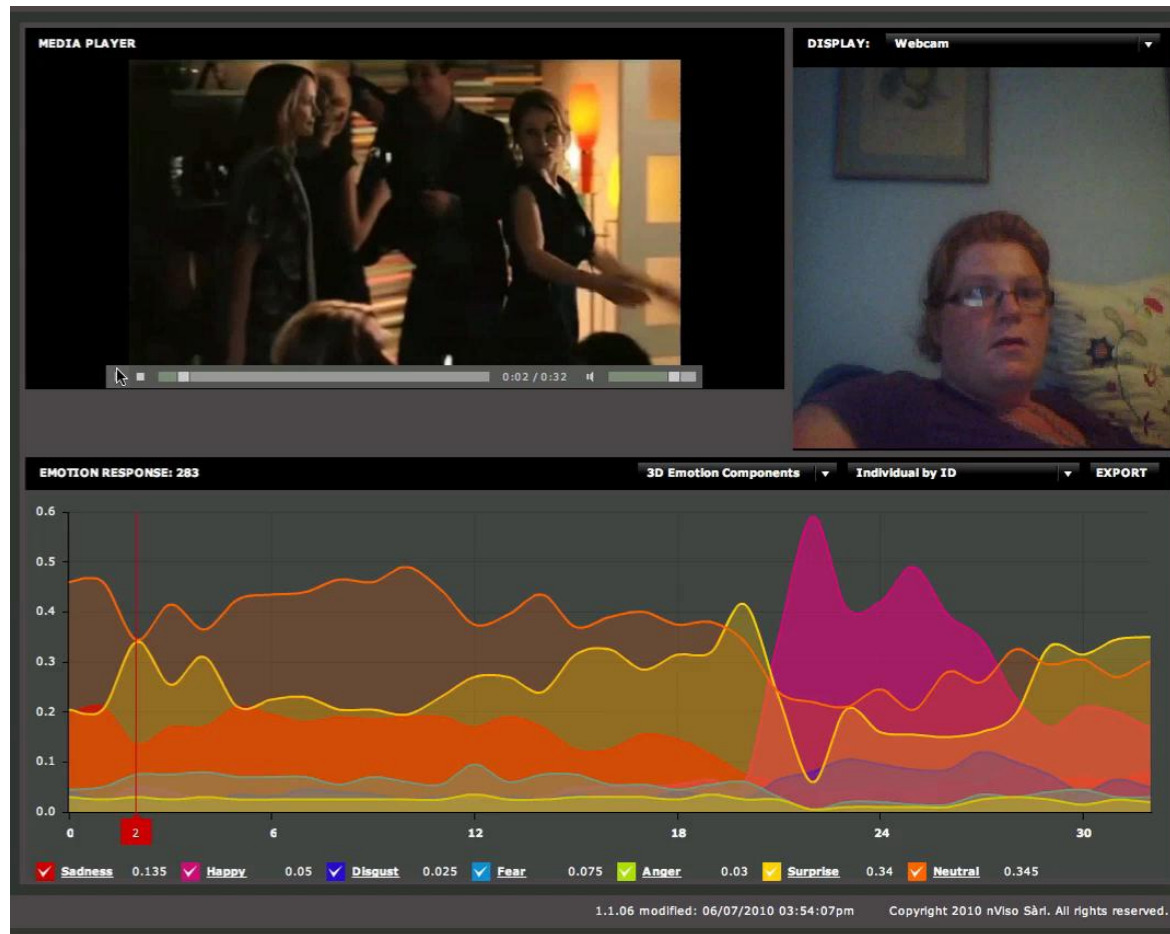
Hundreds of points map to facial muscles



- Artificial intelligence tracks hundreds of points
- Directly map to facial muscles
- Emotion perception model decodes movements

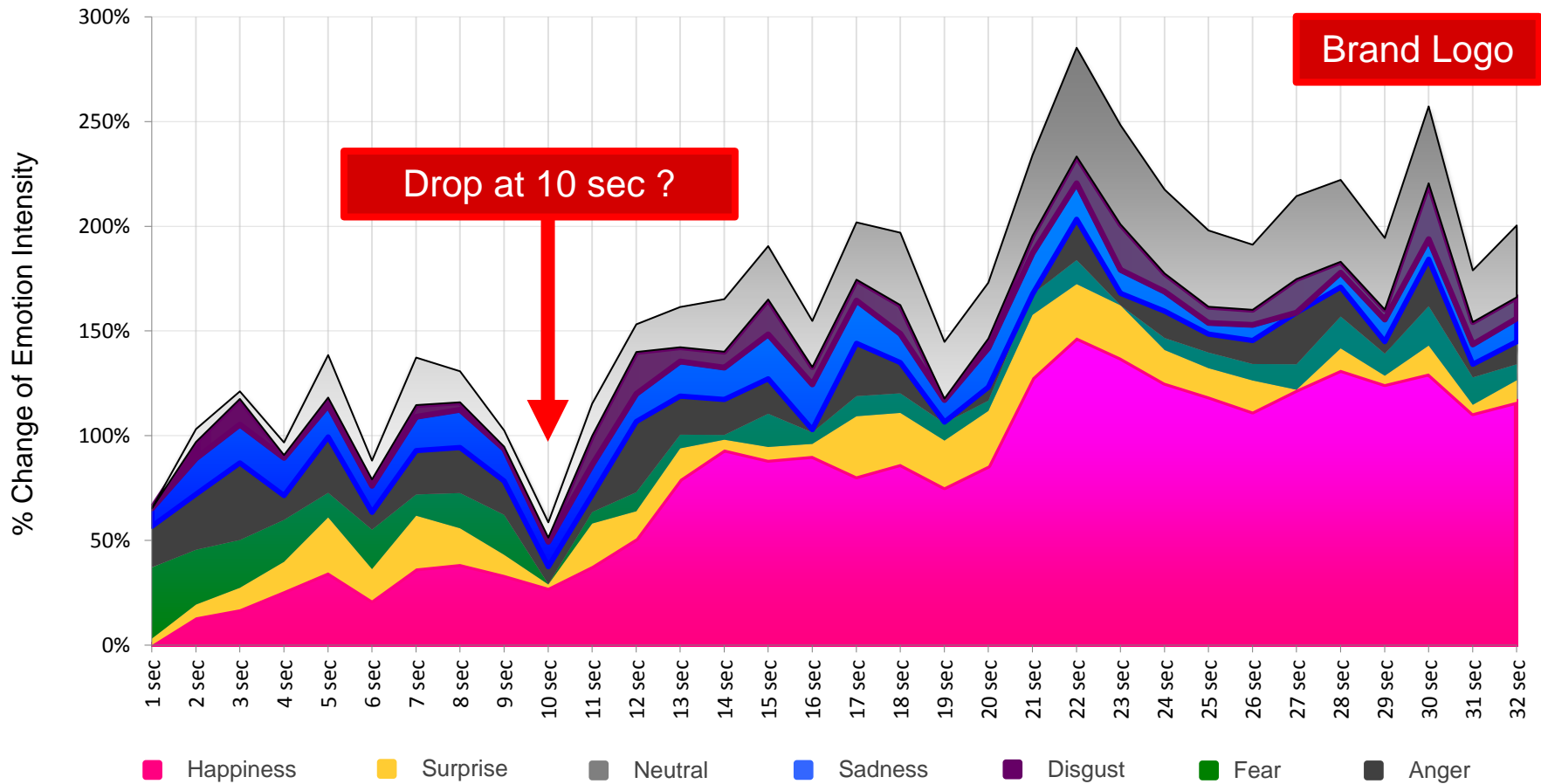
nViso Emotion Recognition Solution

<http://www.youtube.com/watch?v=Bp-LXp8TE5s>



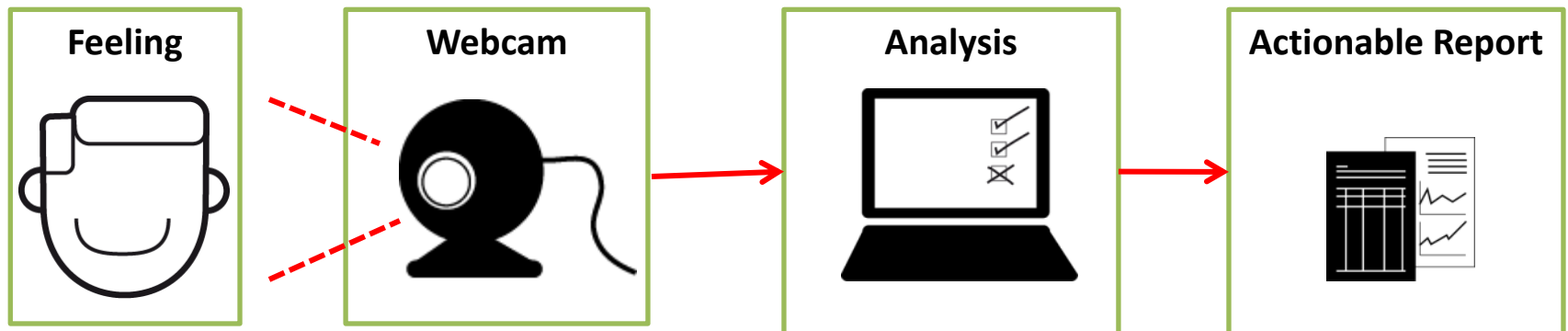
Empowering Smarter Decisions

http://www.youtube.com/watch?v=jvmjubm__q8

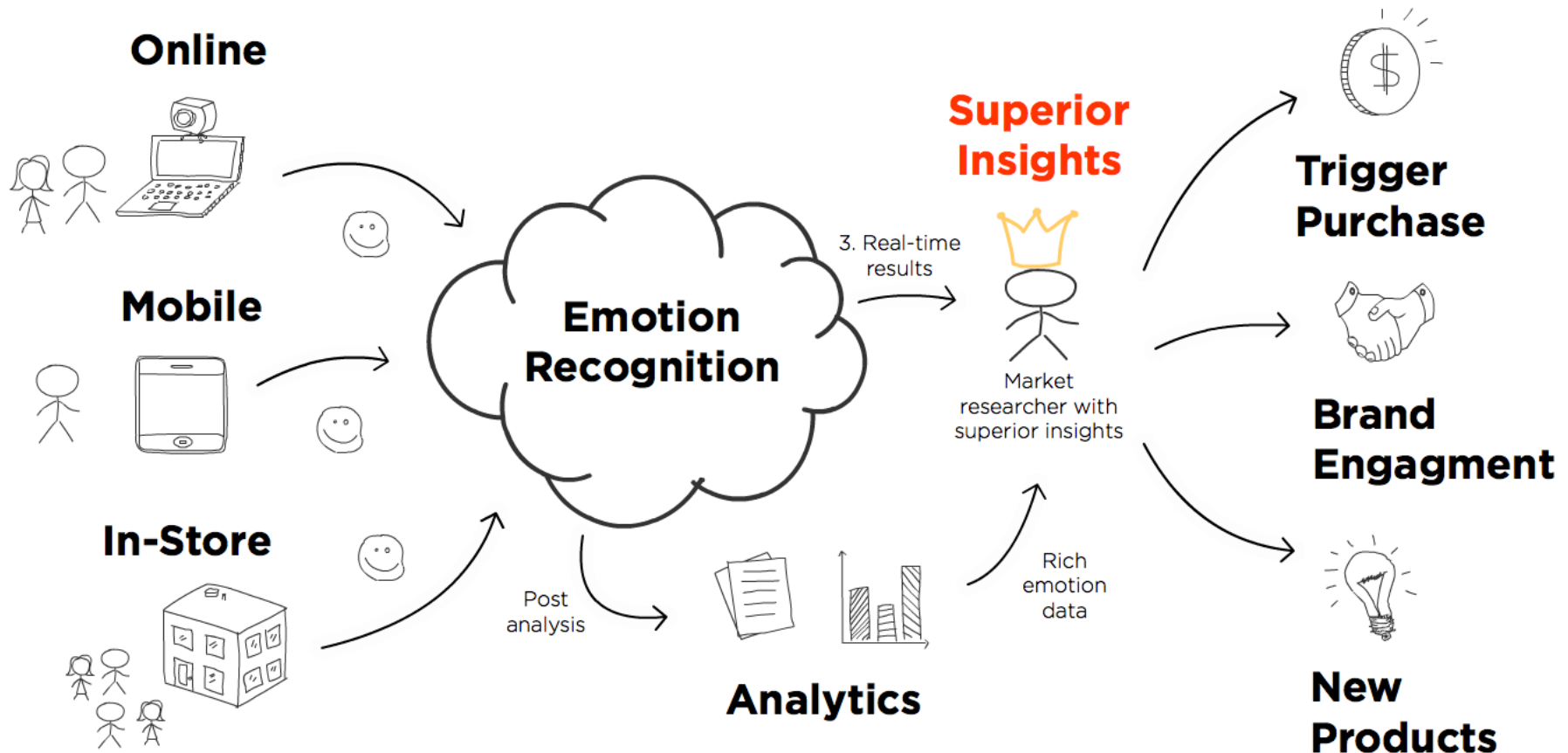


Global Reach With Scale

- Opt-in, emotion video analysis with webcams
- No dedicated lab or personnel
- Instant feedback and reporting
- Objective, culturally unbiased results



Emotion Recognition on the Cloud



Key Testing Challenges We Face

- Our software dev testing is CPU intensive
- Need of maximum browser / OS capability
- Global solution deployment, latency, bandwidth
- Explosion of internet devices (Mobile, Tablet, ...)
- Shortening of release cycle of key platforms (Flash)
- Integration with wide range of client systems
- Limited resources and global dev teams

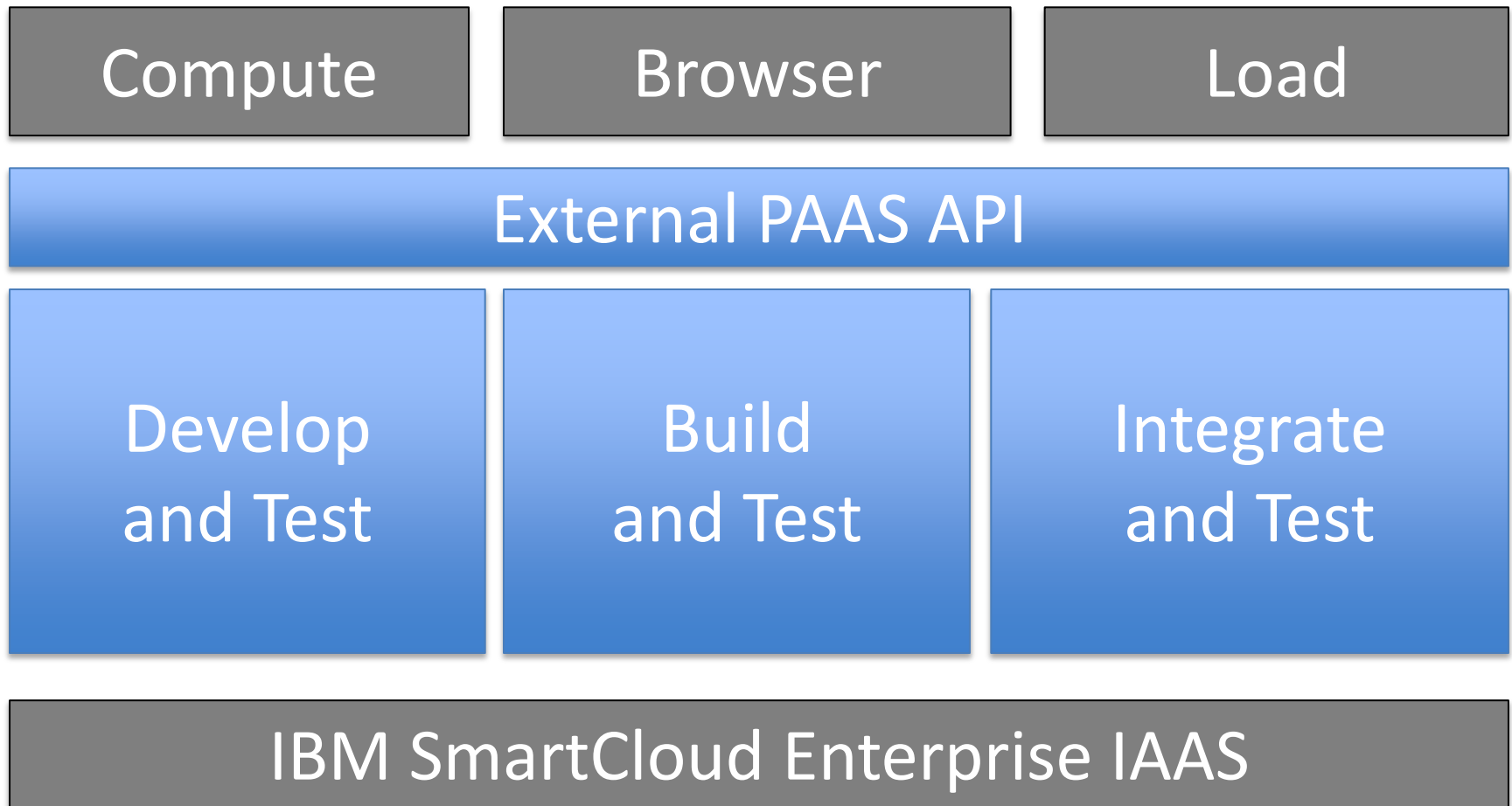
And A Shoestring Budget ...

Leveraging IAAS and PAAS



Not Everything Is A Nail

Leveraging The Cloud For Test



CPU Intensive Software Testing



OR

Buy 2400 Hours
of Compute
Time

150K CHF

1.2K CHF

Browser / OS Capability



The screenshot shows a web interface with a dark theme. At the top, there are three tabs: 'Home', 'Browser Sets' (highlighted in green), and 'Test'. Below the tabs is a table with two columns: 'Available Browsers' and 'Browser Order'. The 'Available Browsers' column contains a list of browser versions with checkboxes. The 'Browser Order' column contains a list of browser versions with drag handles (three horizontal lines) to the left of each entry. A mouse cursor is pointing at the drag handle for 'Firefox 3.6 - Windows'.

Available Browsers	Browser Order
<input type="checkbox"/> Chrome 7.0 - Windows	Chrome 8.0 - Windows
<input checked="" type="checkbox"/> Chrome 8.0 - Windows	Safari 5.0 - OS X
<input type="checkbox"/> Firefox 2.0 - OS X	Firefox 3.6 - Windows
<input type="checkbox"/> Firefox 2.0 - Windows	IE 8.0 - Windows
	IE 6.0 - Windows

OR

Use a browser
testing
PAAS

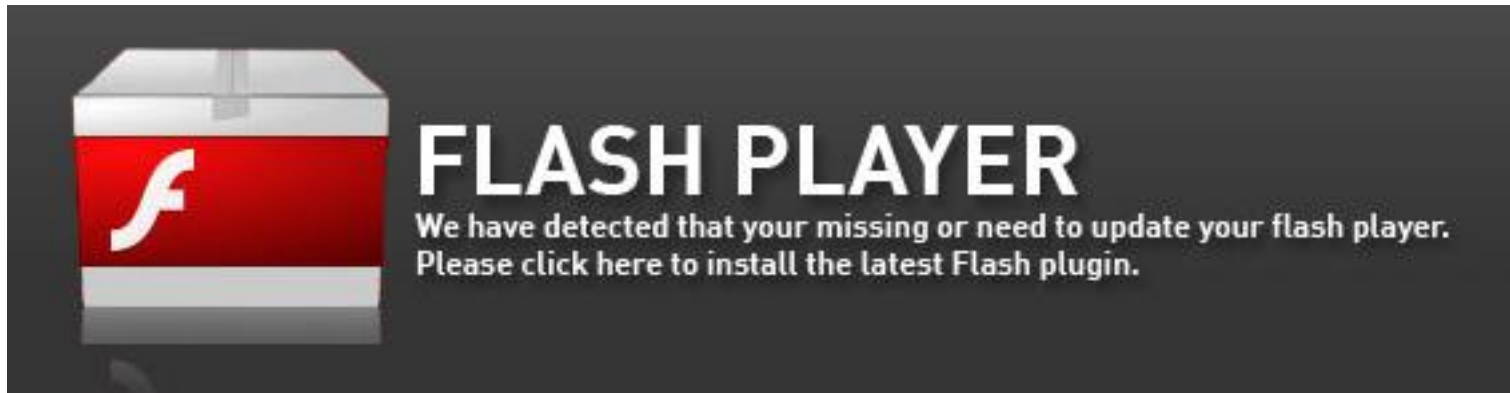
Build a browser
testing lab

40 CHF per
month

Global Load Scale Testing

- Need to load testing in each country / region
- Latency to servers
- Number of concurrent users
- Download times
- Many deployment configuration for clients
- Managing / saving configurations for quick retest
- Understanding server resources needed

Shortening Releases Cycles



- Release cycles of key technologies shortening
- Flash, Silverlight, etc
- Can't test all configs but need to quickly fix issues when problem is found at customer site
- Quick deploy and debug capabilities is key

Explosion of Internet Devices



Global Dev and Test Teams

- Wide range of technologies used in solution
- Diverse teams with diverse skills
- Integration testing and alignment a key challenge
- Sandbox developers with dedicated environments + shared environments for integration



What Didn't Work As Expected

- OpenGL drivers

-> display drivers not the same as dedicated hardware

- “On-demand” is DIY

-> you have to build the light switch yourself

- Exporting / Sharing Across Data Centers

-> you're on your own

Top Operational Challenges

- Specialized Infrastructure
- Planning / Non-elastic Pricing
- Lack of Standards / DIY On-demand
- Exporting / Importing / Sharing Data

Summary

- Combining both IAAS and PAAS for Testing Rocks!
- Doesn't solve all problems, but gets around quite a few
- As industry matures operation challenges hopefully addressed

About nViso

