



NEXT GENERATION DESKTOP UIS FOR WINDOWS 10

DAVID WÜRFEL

#dwx15



DAVID
WÜRFEL

- User Interface Engineer
 - Development of custom controls
 - Implementation of visual designs in XAML
- Master of Science
 - in Computer Science



CENTIGRADE
GMBH

- Locations
 - Saarbrücken (Headquarters)
 - Mülheim an der Ruhr (Office)
 - Frankfurt am Main (Office)
- Founded 2005
- 35+ Team members
 - Cognitive Psychology
 - Communications Design and Game Design
 - Software Engineering

OVERVIEW

- Windows 10
- Tailored UIs
- Desktops
- UWP Apps
- Live Coding
- Q & A

WINDOWS 10

The philosophy

Start

Justin
Harrison



Search



Share



Start



Devices



Settings

WINDOWS 8

ONE UI TO RULE THEM ALL?

Wendy Teo

RE: Dinner tonight? Sounds good. How about the new place with the back patio?

Mail

8

Soccer practice
Rec Center
5:30 PM – 8:00 PM



8

Monday



Internet Explorer



Photos



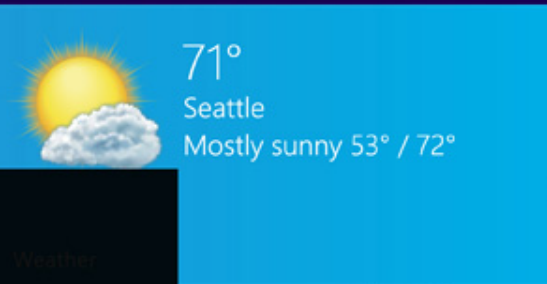
Maps



SkyDrive



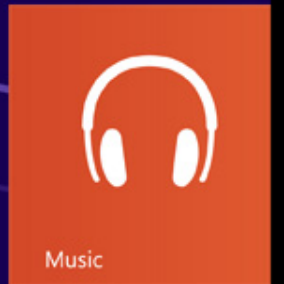
Games



71°
Seattle
Mostly sunny 53° / 72°



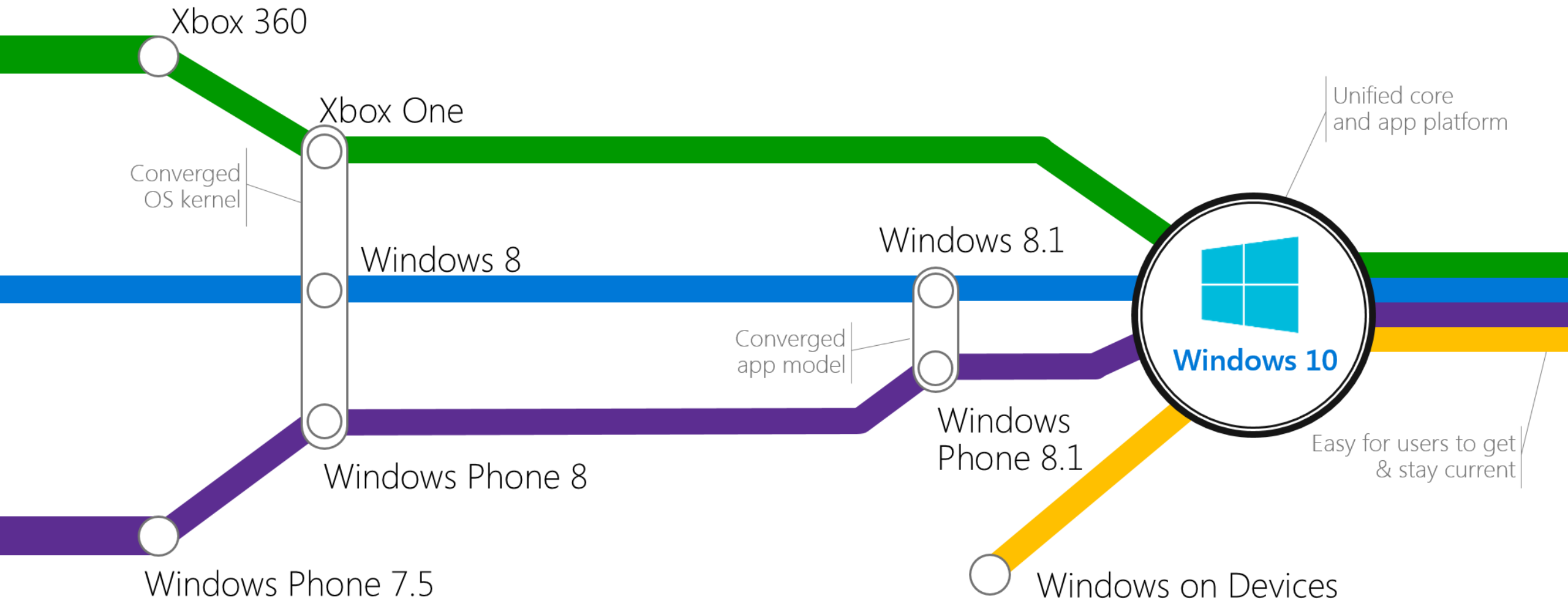
Hot air balloon festival takes off in the valley this weekend



Music



10:25 Friday
October 19



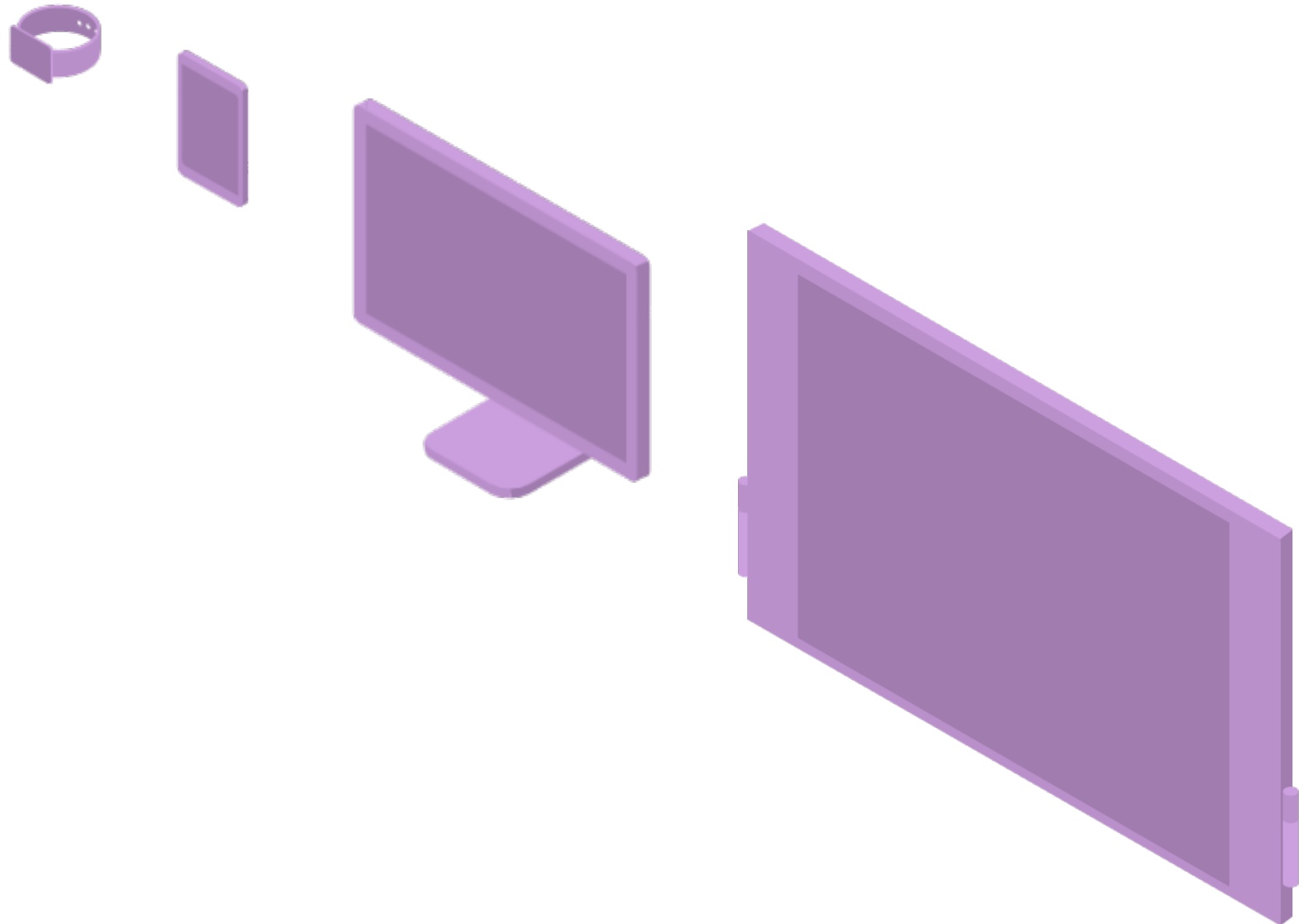
WINDOWS 10: ONE PLATFORM TO RULE THEM ALL?



TAILORING

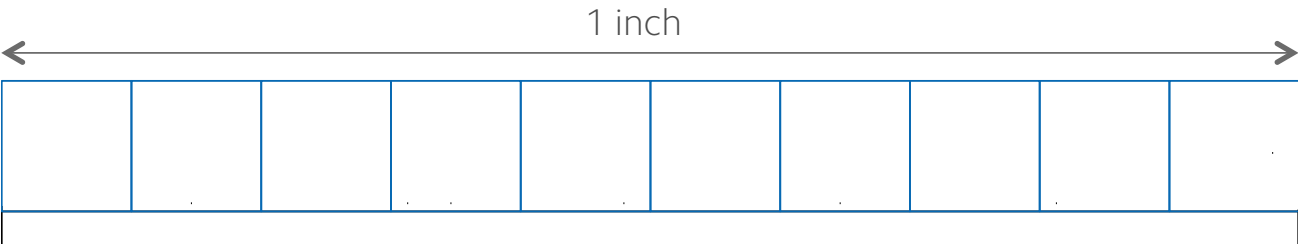
device specific customizations

- Display size
- Resolution
- Pixel density
- View distance



pixel density

$\sqrt{width^2 + height^2} /$
diag. display size



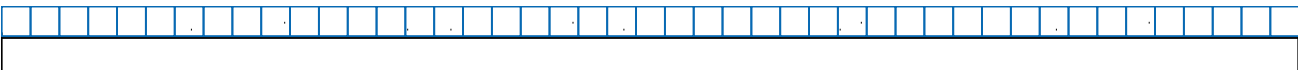
STANDARD FULL-HD
DESKTOP

1920x1080 at 22"
100 PPI



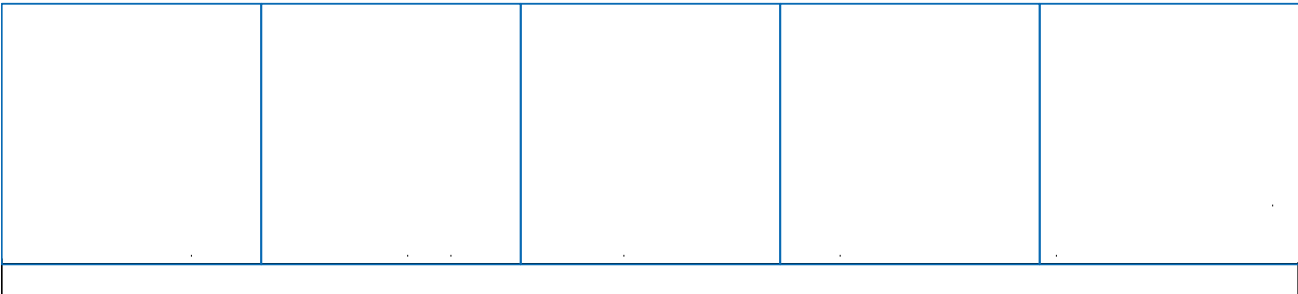
RETINA MACBOOK

2880x1880 at 15"
230 PPI



NEXUS 5

1920x1080 at 4,95"
450 PPI

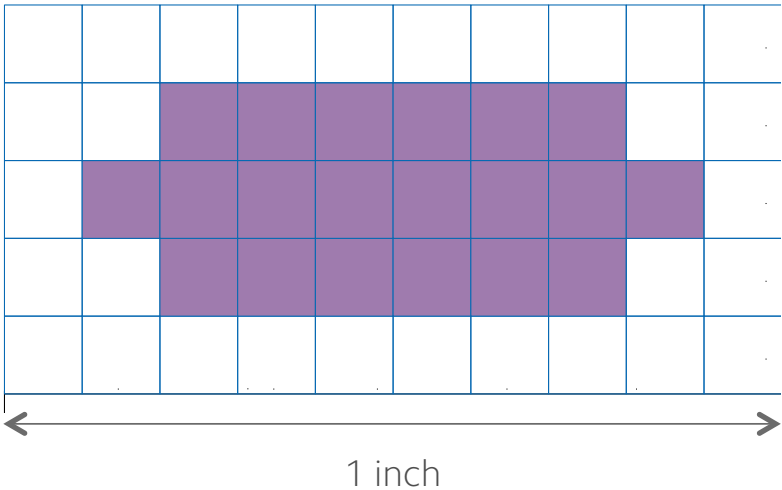


SURFACE HUB

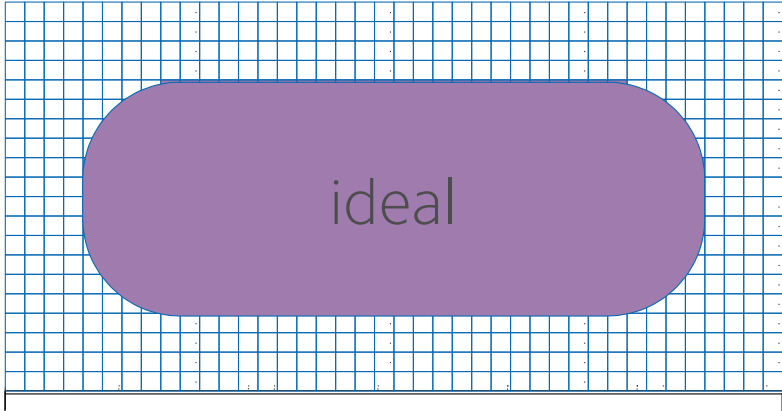
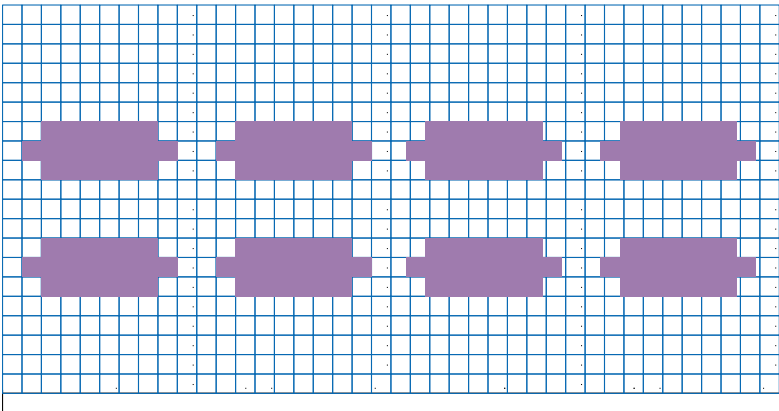
3840x2160 at 84"
~50 PPI

HIGH DENSITY BENEFITS?

more
content



better
visuals





SMALL SCREENS

SMARTPHONES,
SMARTWATCHES,
TABLETS

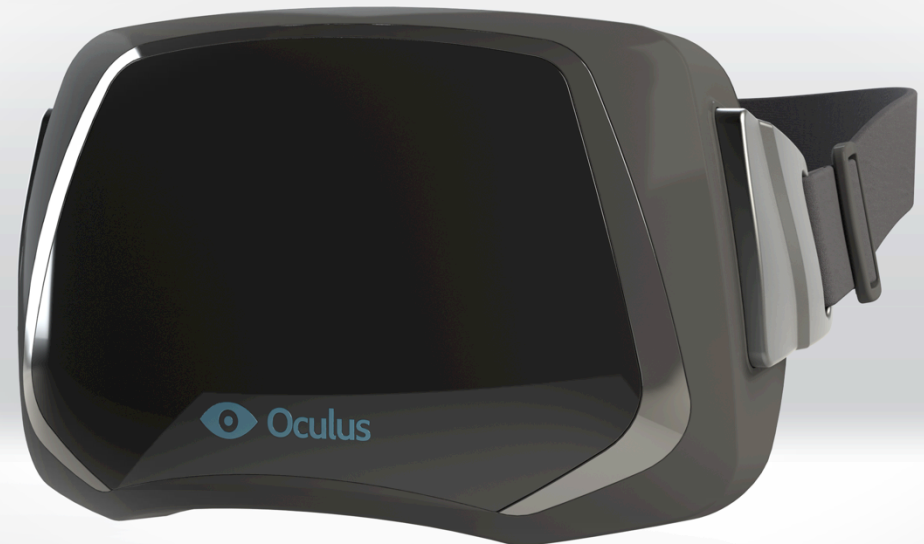
BIG SCREENS

CONTROL ROOMS,
CONFERENCE
ROOMS,
PROJECTORS



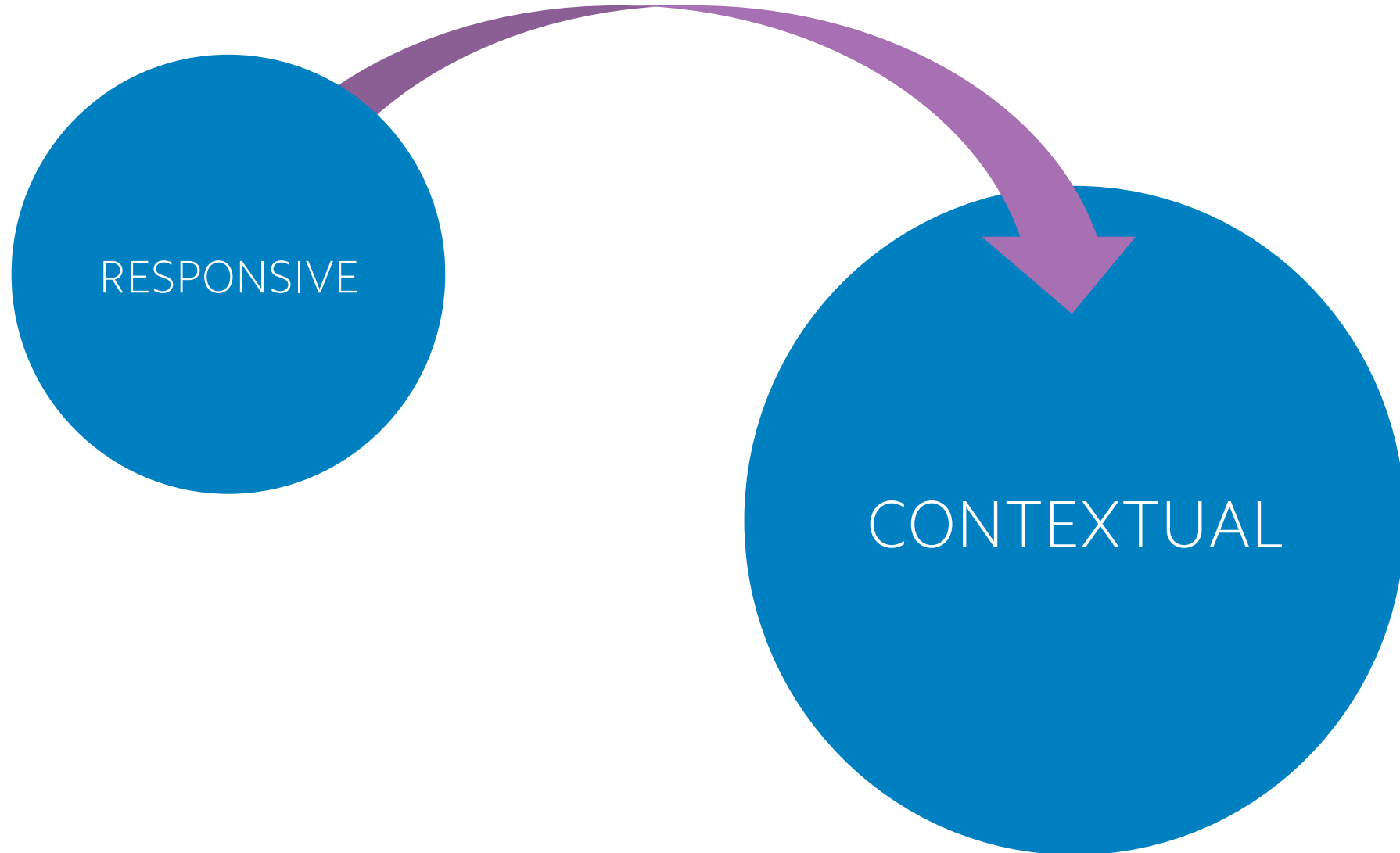
VR AND AR

DEFINITION OF
VIEW DISTANCE?



References: http://news.microsoft.com/?attachment_id=152383

http://b-i.forbesimg.com/davidthier/files/2013/03/Oculus_300dpi_01a.png



RISE OF THE DESKTOP

4K – 8K – Multimonitor – Surface Hub

THE OFFICE

A TYPICAL
DESKTOP?



COLLABORATION

DIFFERENT PERSONAS
AT THE SAME TIME
ON ONE DEVICE



- Line of business
- Insights from smartphone era
- New use cases
- Known use cases

UNIVERSAL WINDOWS PLATFORM

UWP Apps aka. Universal Apps

- Windows Runtime
- One project, one binary
- Extension SDKs
 - Stubs for all devices
- Compile against Windows versions

- Device independent, abstract pixel information

$$\text{Scale factor} = 100\% * (\text{pixel density} / 96 \text{ PPI}) * (\text{view distance} / 28")$$

$$\text{effective resolution}_{x,y} = \text{resolution}_{x,y} / \text{scale factor}$$

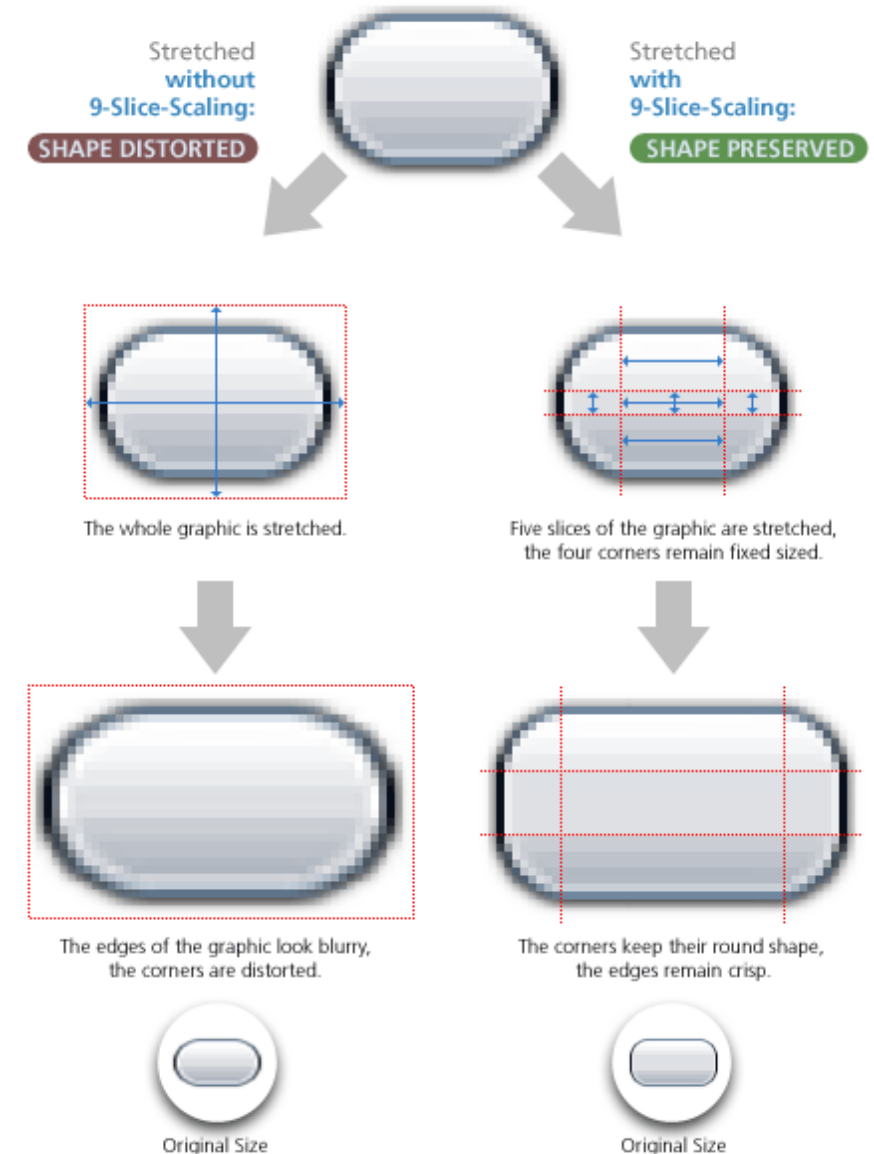


Display size, device type, and aspect ratio	Effective resolution and scale factor
4" phone; 5x3	320x533 at 150%
6" phone; 9x16	411x731 at 350%
12" 2 in 1; 3x2	1440x960 at 150%
24" 4K desktop; 16x9	1920x1080 at 200%
84" 4K wall; 16x9	2560x1440 at 200%

LIVE DEMO

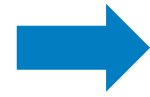
Features of Windows 10, UWP, and Visual Studio 2015

- 9 slice scaling properties
- MRT and asset packs
- Design guidelines
 - dev.windows.com/design
 - 4x4 pixel grid



- RelativePanel
- Adaptive views (VisualStateManager)
 - Setters
 - Triggers (AdaptiveTrigger, custom triggers)
- View replacements
- Extension SDKs

- The desktop is still alive
- Creativity!
- UX Design!
- Developers!
- APIs!

 Even the desktop can be tailored

Q & A

„Thank you.“



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