



Wile E. Coyote: Looney Tunes (Chuck Close)

Avoiding the Big Crash

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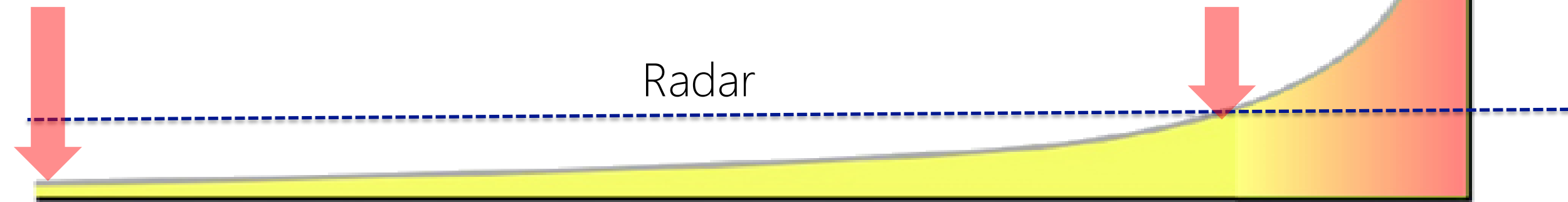
The Long Nose

1984
Early Multi-Touch

2007
iPhone

\$1B

Radar



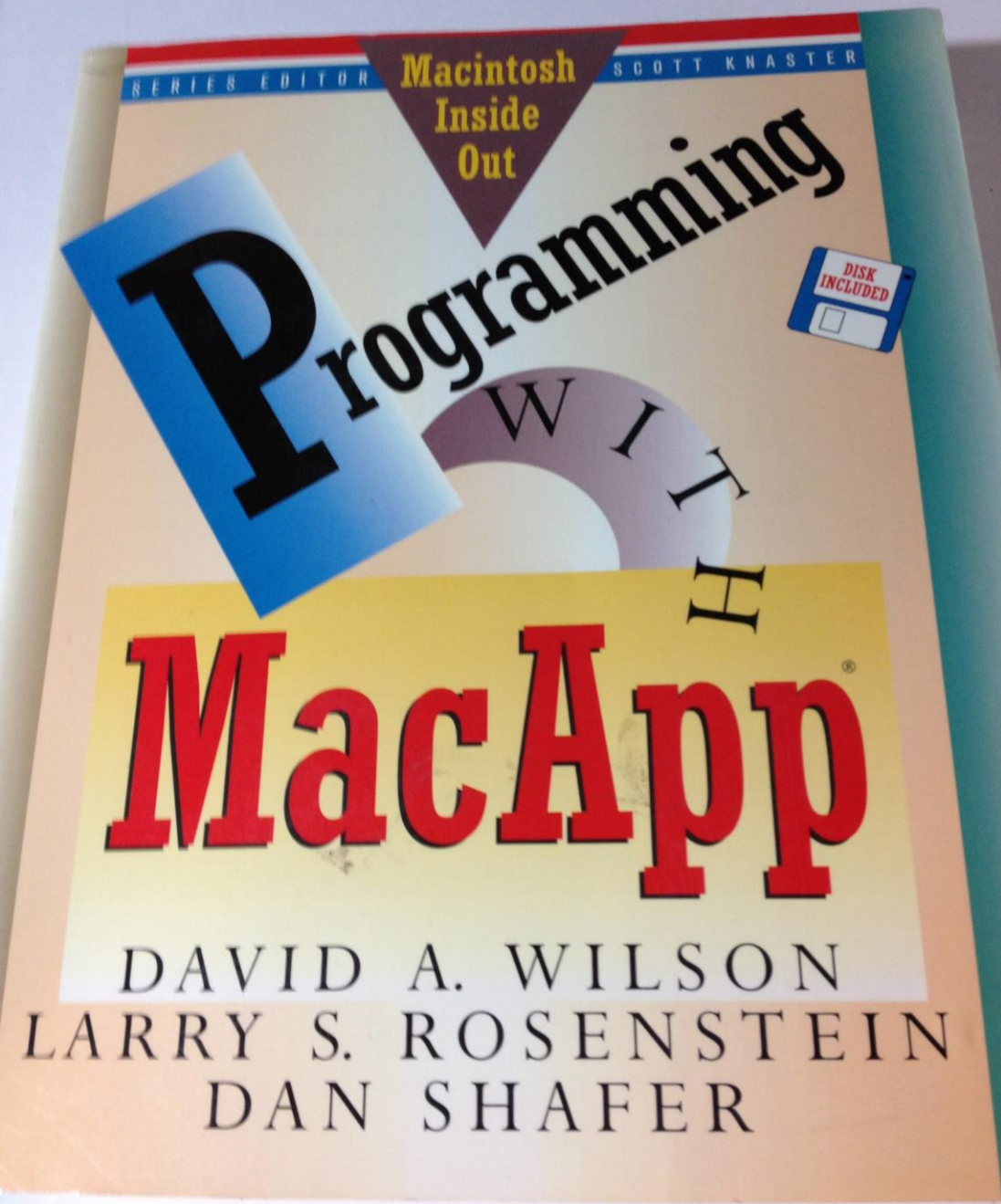
← ~ 20 years →



Xerox Alto (1973)

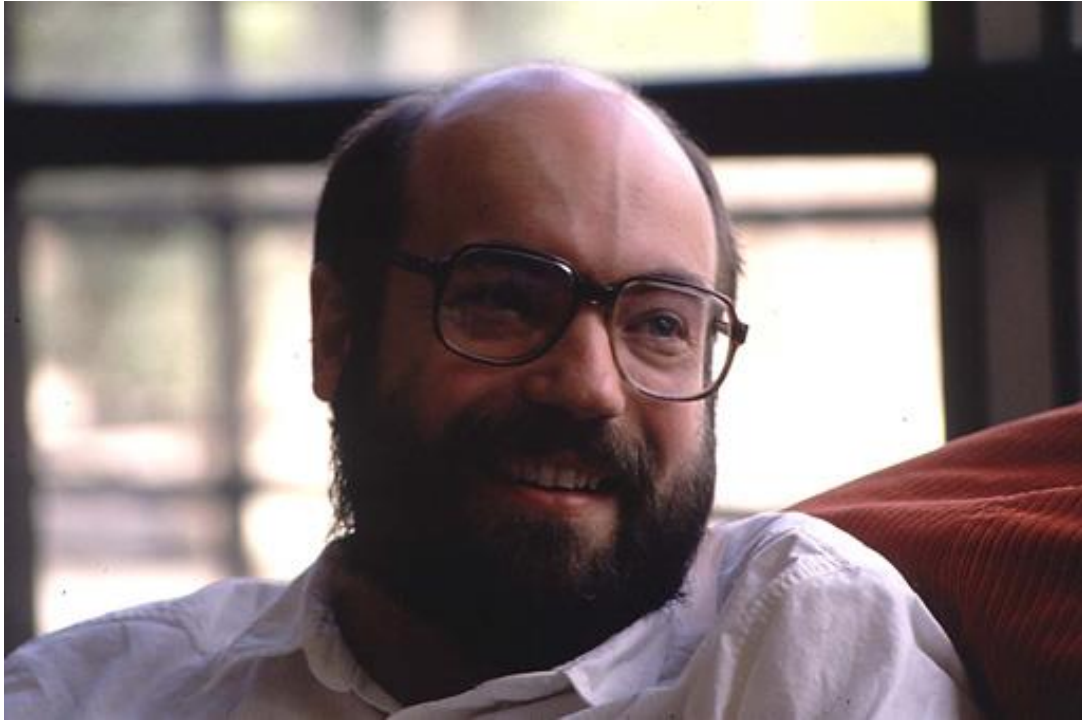


Apple Macintosh (1984)



1990





Weiser, M. (1991). The computer for the 21st century. *Scientific American*, 265(3), 94-104.

Ubiquitous Computing

- everywhere
- transparent

Boards, Pads & Tabs

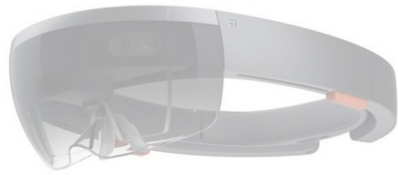


Codify the known

=

Entrench the *Status Quo*?

Lowest Common Denominator
or
Play to Individual Strengths?





84" Surface Hub



55" Surface Hub

Screen Width



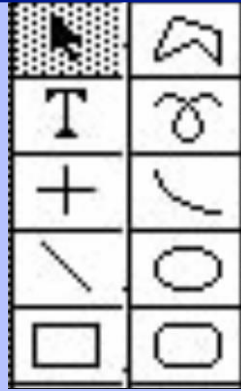
Range of reach





File

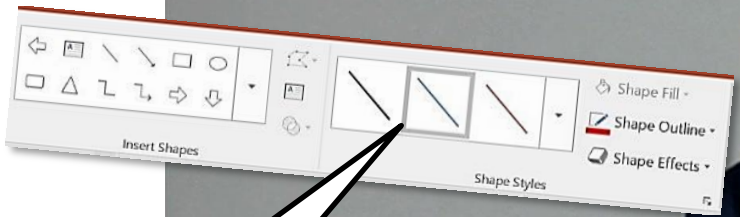
Draw



Example of In-Place Commands



Compare to PPT Draw tool Ribbon



Ribbon as Palette?

Bimanual In-Place Commands with Pen and Touch

Ribbon as Palette?



nest

IN 25 MIN

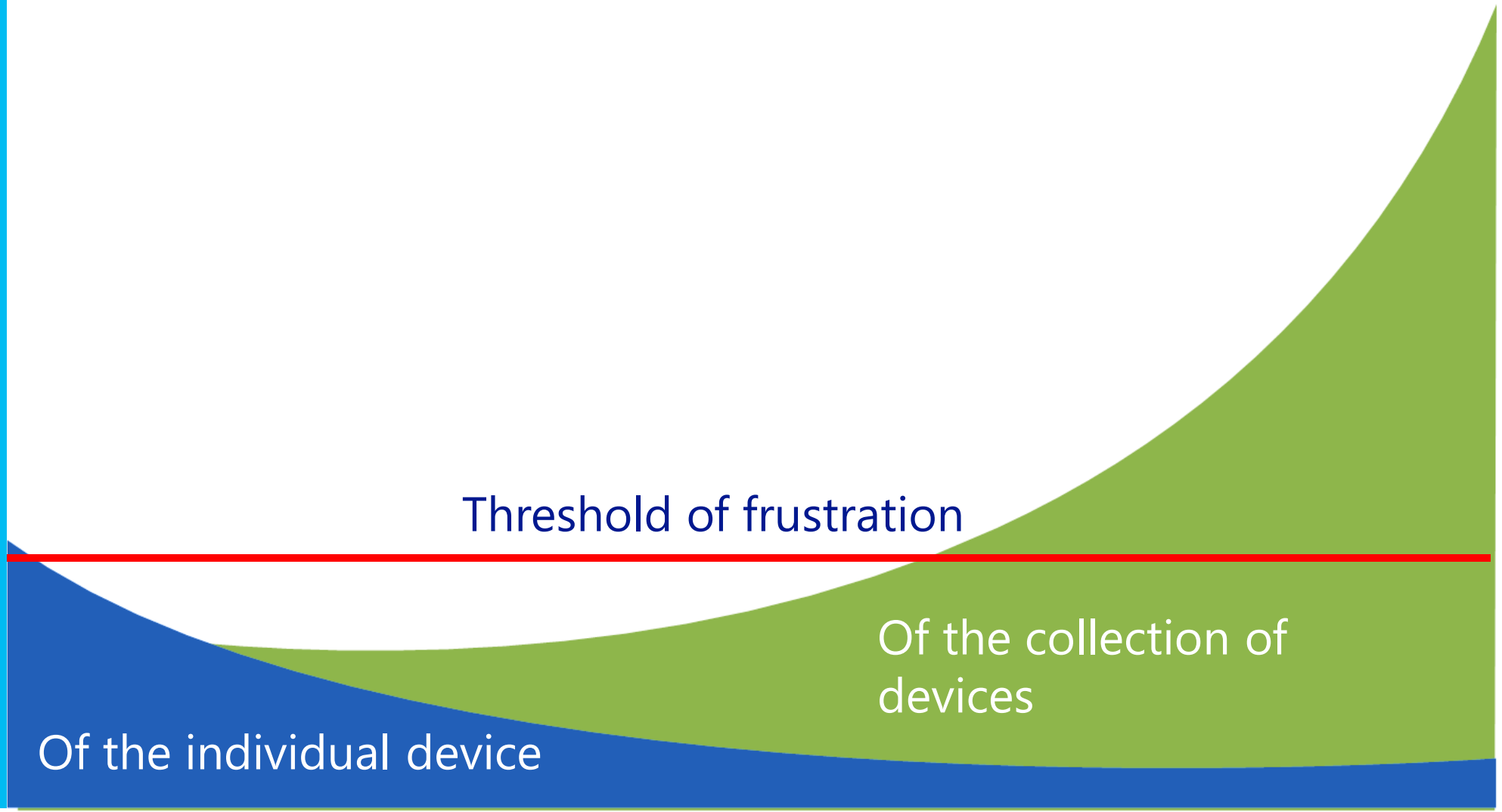
72





The more you eat,
the more you want.

Complexity



Threshold of frustration

Of the individual device

Of the collection of devices

2 Rules

- 1 Every new product and service must provide great experience and excellent value—it works, flows & has demand.
- 2 But each must also reduce the complexity and increase the value of all of the others. Things work together.



Tech

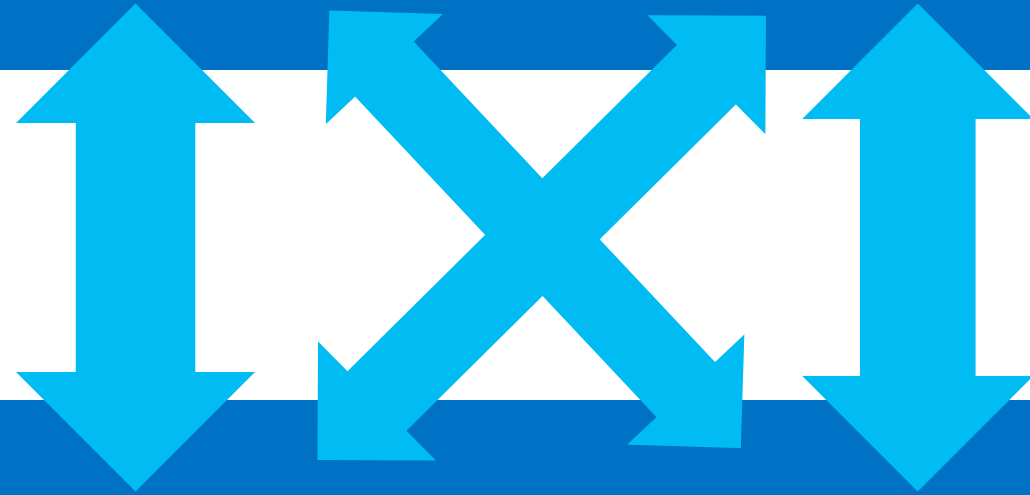
Seamless

Aggregation & Disaggregation

En

Graceful

Augmentation & Degradation



Qualities

Transitions

Tech

Seamless

Aggregation & Disaggregation

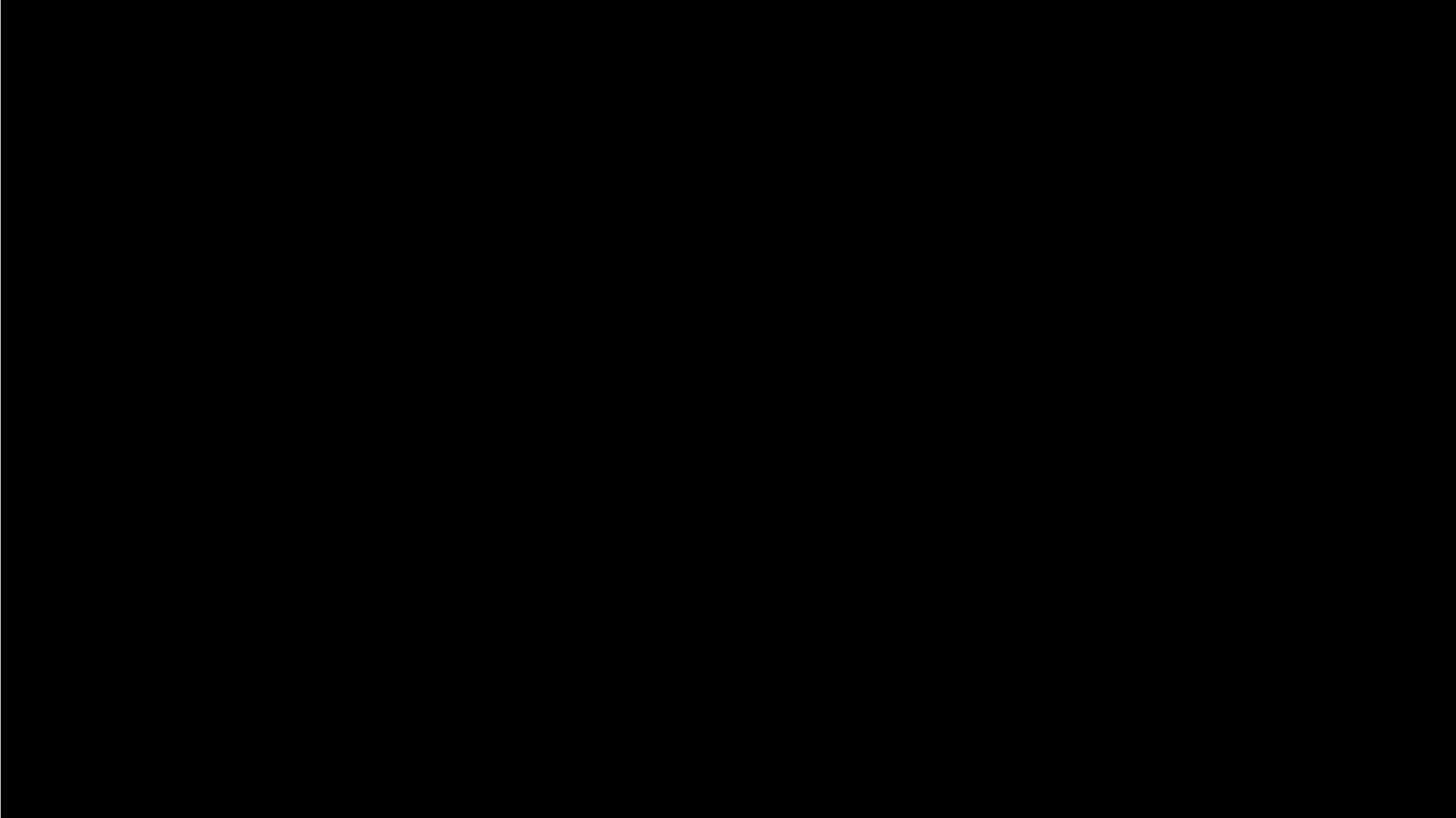


Fn

Graceful

Augmentation & Degradation





Panelrama

ENABLING EASY DEPLOYMENT OF CROSS-DEVICE WEB APPLICATIONS
JISHUO YANG, DANIEL WIGDOR



Thank you for the introduction. Good afternoon, everyone. I am here to present to you Panelrama, a web framework enabling distribution across multiple devices. This work is done by myself, Jishuo Yang and Daniel Wigdor at the University of Toronto. We will discuss how we can take advantage of multiple devices. I want to approach this same multi-device problem from the opposite perspective. How can we take advantage of multiple devices? Before I begin, let me reassure you that the application you see on the screen is a part of our live demo.



Panelrama

Slide List

Motivations



Panelrama

ENABLING EASY SPECIFICATION OF CROSS-
DEVICE WEB APPLICATIONS

JISHUO YANG, DANIEL WIGDOR

dgp
dynamic graphics project



Panelrama

Acknowledgments

Instructions

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Motivations

Benefits of computing devices



Slide List

Speaker

Notes

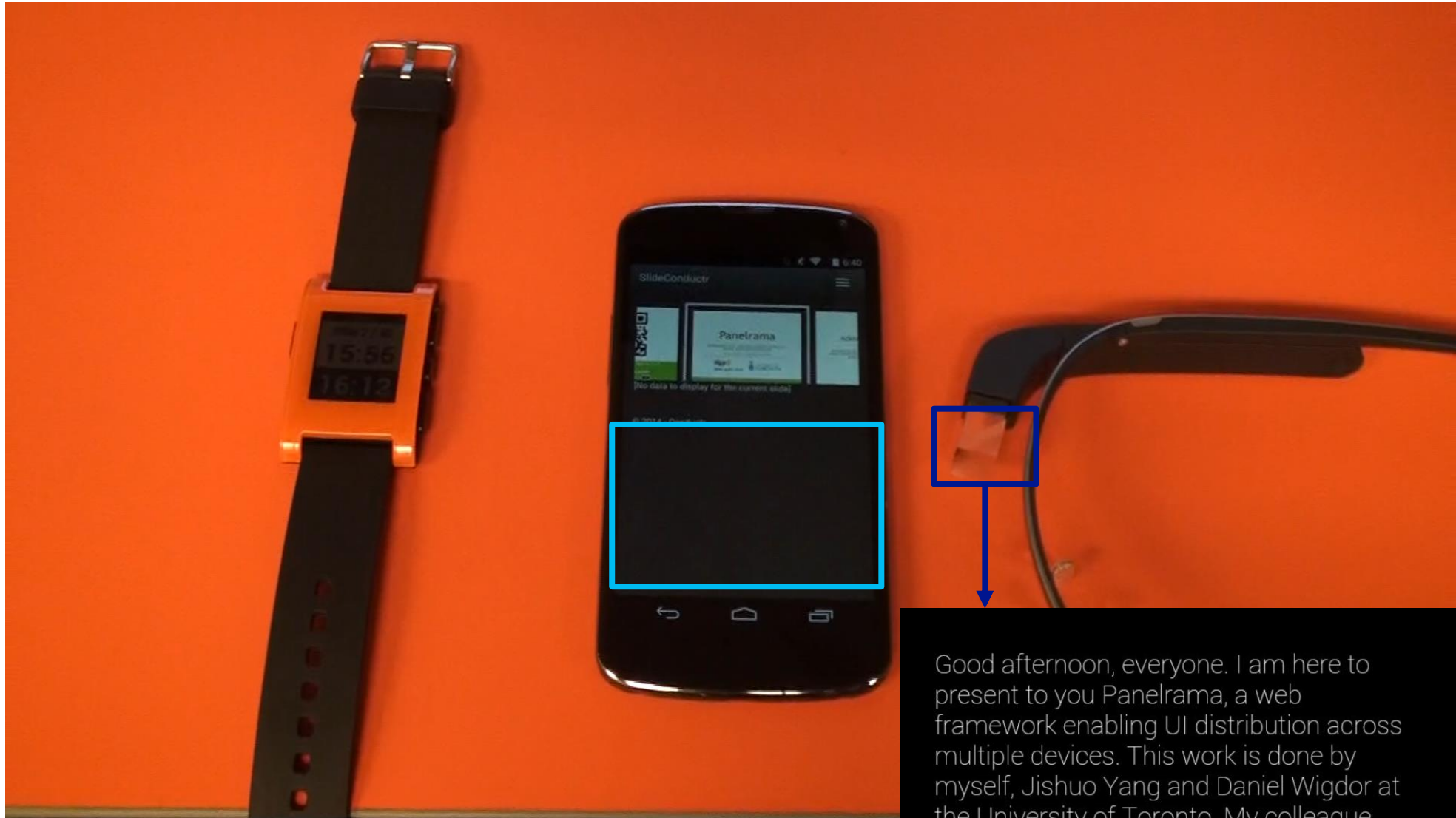
10:10 AM

Motivations

Proliferation of computing devices

- More Powerful
- More Affordable
- More form factors





Good afternoon, everyone. I am here to present to you Panelrama, a web framework enabling UI distribution across multiple devices. This work is done by myself, Jishuo Yang and Daniel Wigdor at the University of Toronto. My colleague, Peter, had just presented to you an



2 mins ago

In the Wild

Do you know this guy?

Do you like this guy?

Are you this guy?

Do you like who makes you this guy?

Natural?

Fix on device?





Questions of Aspiration

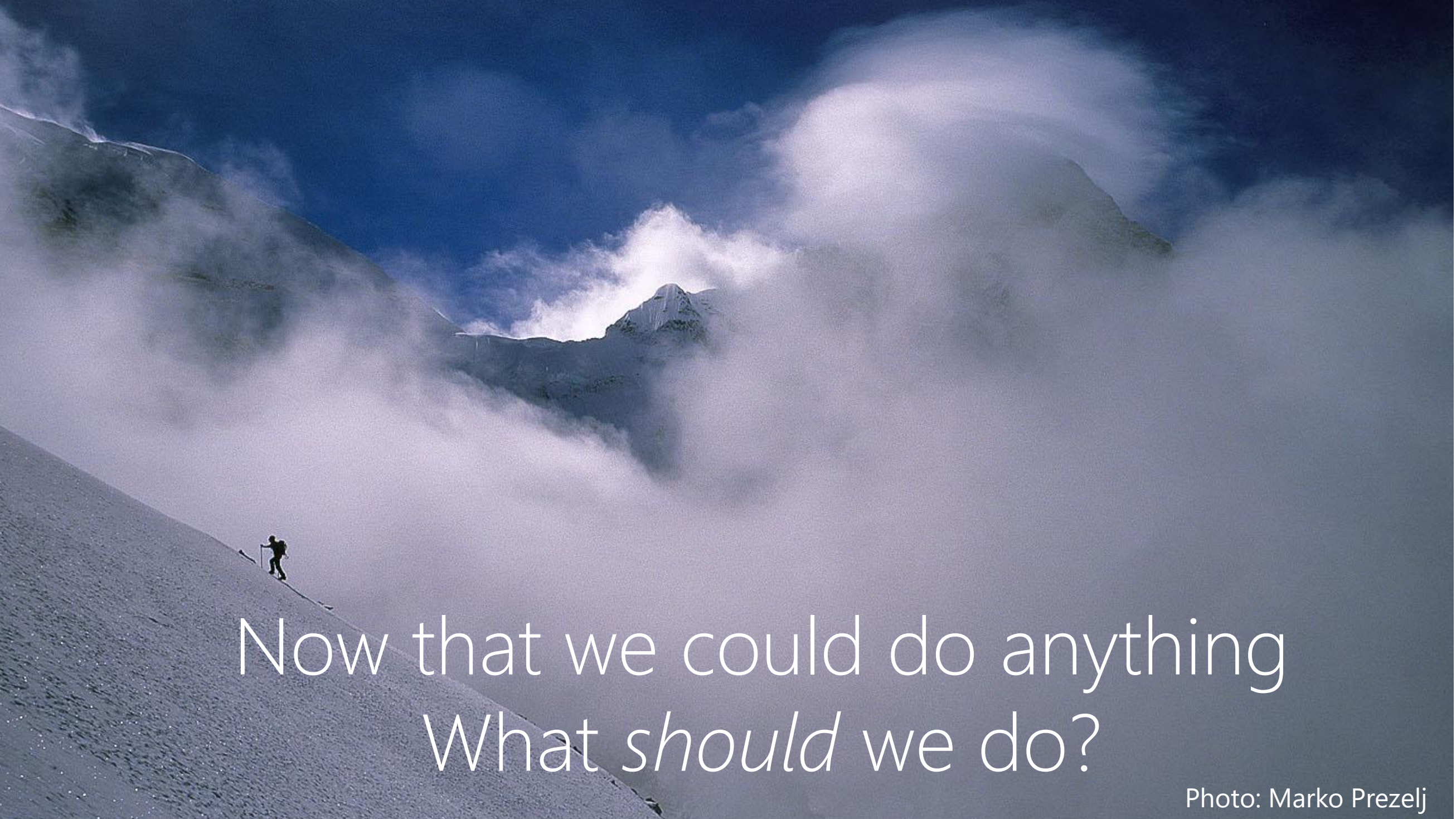
What if things just worked?

What if things just worked together?

What if things just worked together seamlessly?

What if in so doing, complexity went down, and value up,
for everything?

What if we created developer's tools to facilitate making this happen?



Now that we could do anything
What *should* we do?

Thankyou

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