



Transforming the PC

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PC Client Group

The Evolution of PERSONAL COMPUTING

Productivity
80s and 90s



Portability
00s



Ubiquity
10s



A NEW “2-IN-1” MOBILE COMPUTING EXPERIENCE

Smartphone



Tablet



Consumption

Ultrabook™
2-in-1



Ultrabook™



Notebook



Creation/Productivity

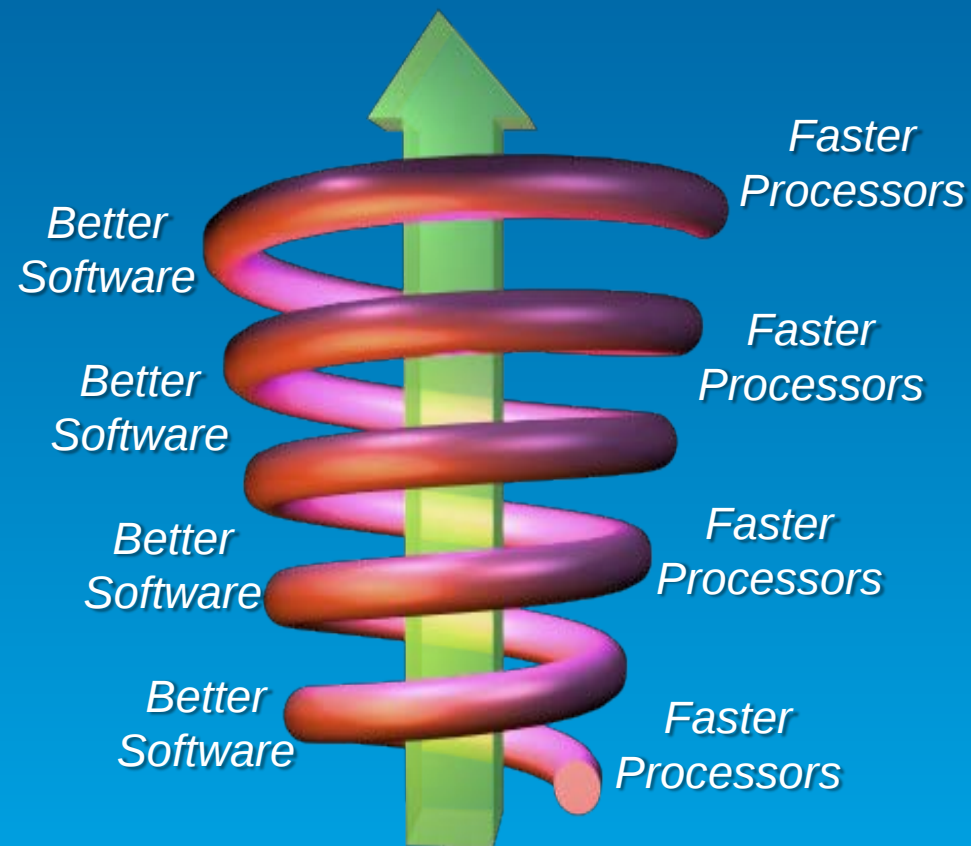
Bay Trail 2-in-1's
2H 2013

Other names and brands may be claimed as the property of others

15 Years Ago...

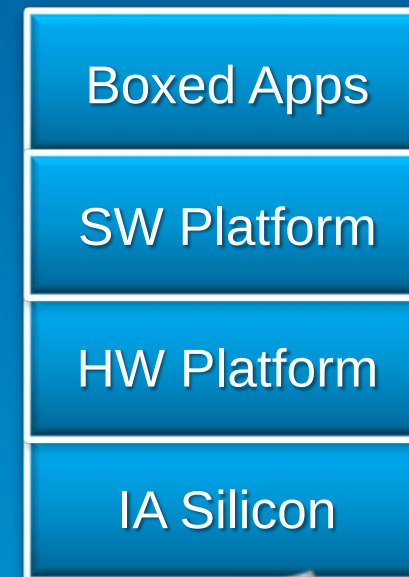
*Winning Was All About Clock
Frequency & Performance*

“Wintel” + Software Spiral



*Technical Ownership & Expertise Were Neatly
Divided Between Horizontal Layers*

PC Stack





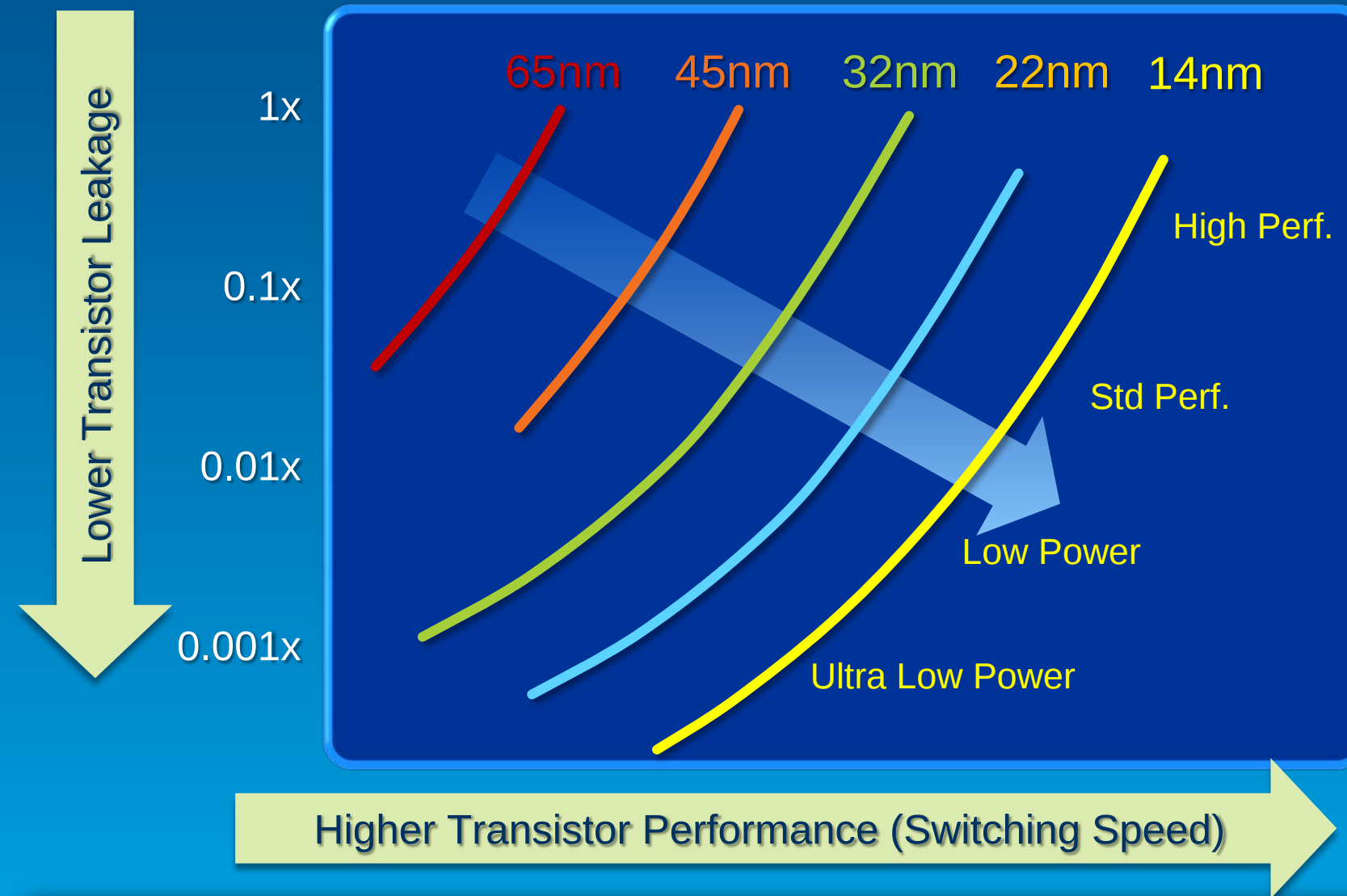
The Technology Stack Today

Everything Matters!

Built on the
FOUNDATION of **MOORE'S LAW**



SoC Tri-Gate Transistor Options



14nm Tri-Gate SoC technology offers a wide range of transistors

TERAFLOPS TO FANLESS DESIGNS

UNMATCHED SCALABILITY



First Teraflop Computer:
ASCI Red (1997)
9,298 Pentium® Pro
~144 Square Meters

TERAFLOPS TO FANLESS DESIGNS

UNMATCHED SCALABILITY



4th Generation Intel® Core™
Processor
Teraflop Notebook

* projected

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TERAFLOPS TO FANLESS DESIGNS

UNMATCHED SCALABILITY

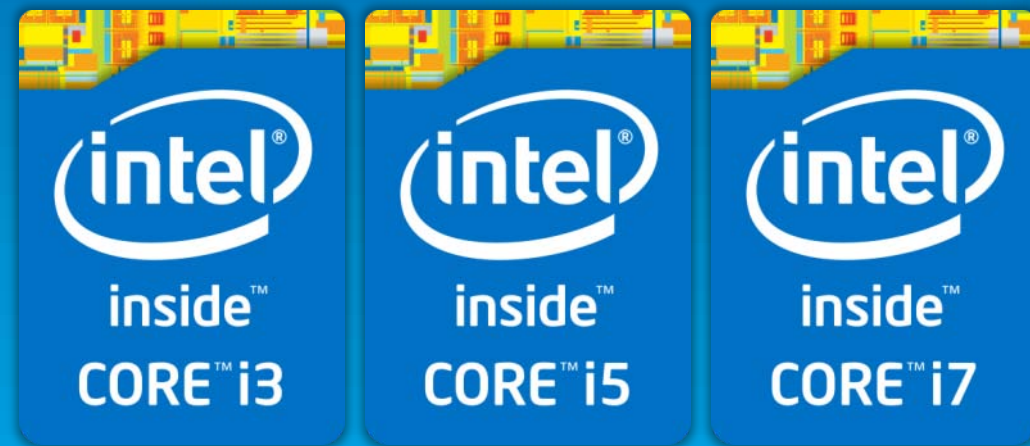


4th Generation Intel® Core™
Processor
Teraflop Notebook



Fanless Ultrabook™ 2-in-1

4th Generation Intel® Core™ Processor 2013



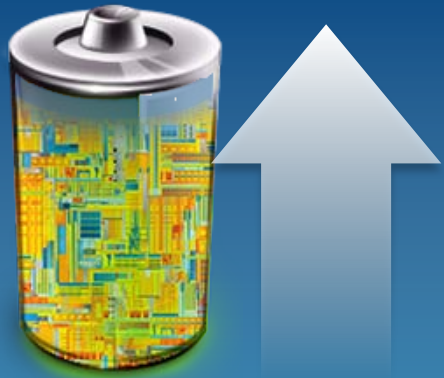
GREATEST Battery Life Increase
in Intel's History

FIRST System-on-a-Chip
for PCs for 2-in-1 Form Factors

UP TO 2X Graphics Performance
in Ultra-thin Form Factors

4th Gen Intel® Core™ Processor Family

Driving the greatest PC innovation in a decade!



Biggest battery
life increase
in Intel history¹



Thinnest, most
flexible touch PC
designs ever



Unprecedented
graphics in ultra-
thin computing¹



New Experiences
Gestures, Speech,
Emotion detection,
Context
Awareness

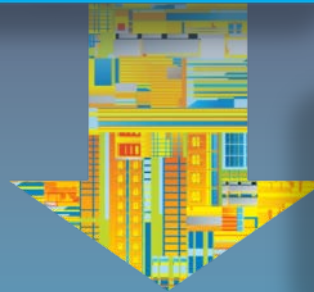
¹ See appendix for benchmark configurations and details

INTEL® CORE™ PROCESSOR EXCEEDING OUR EXPECTATIONS ON POWER



Lowering TDP

2010
35W



2011
17W



Lowering TDP + Optimizing
Workloads via SDP

CES
7W

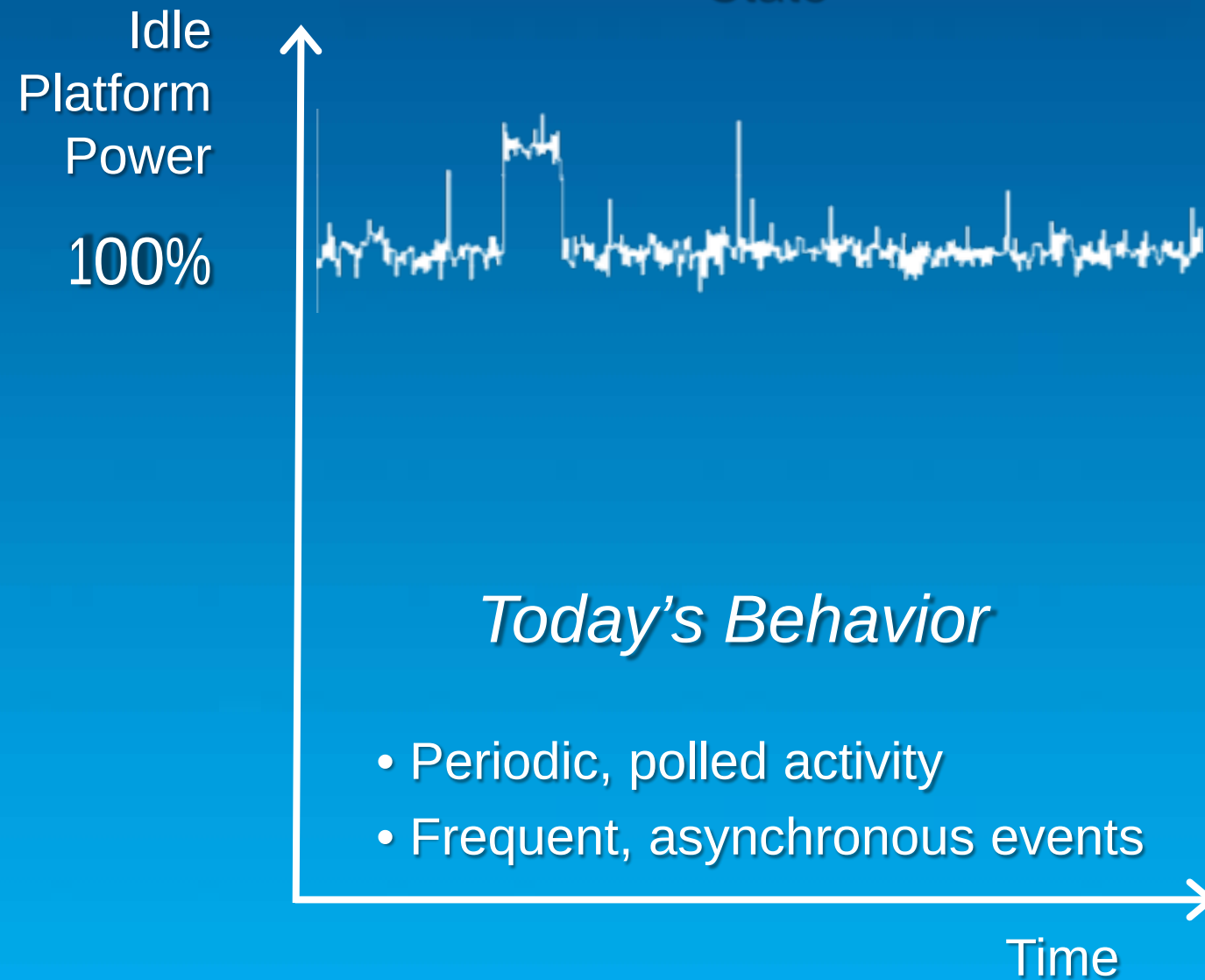


Now
4.5W

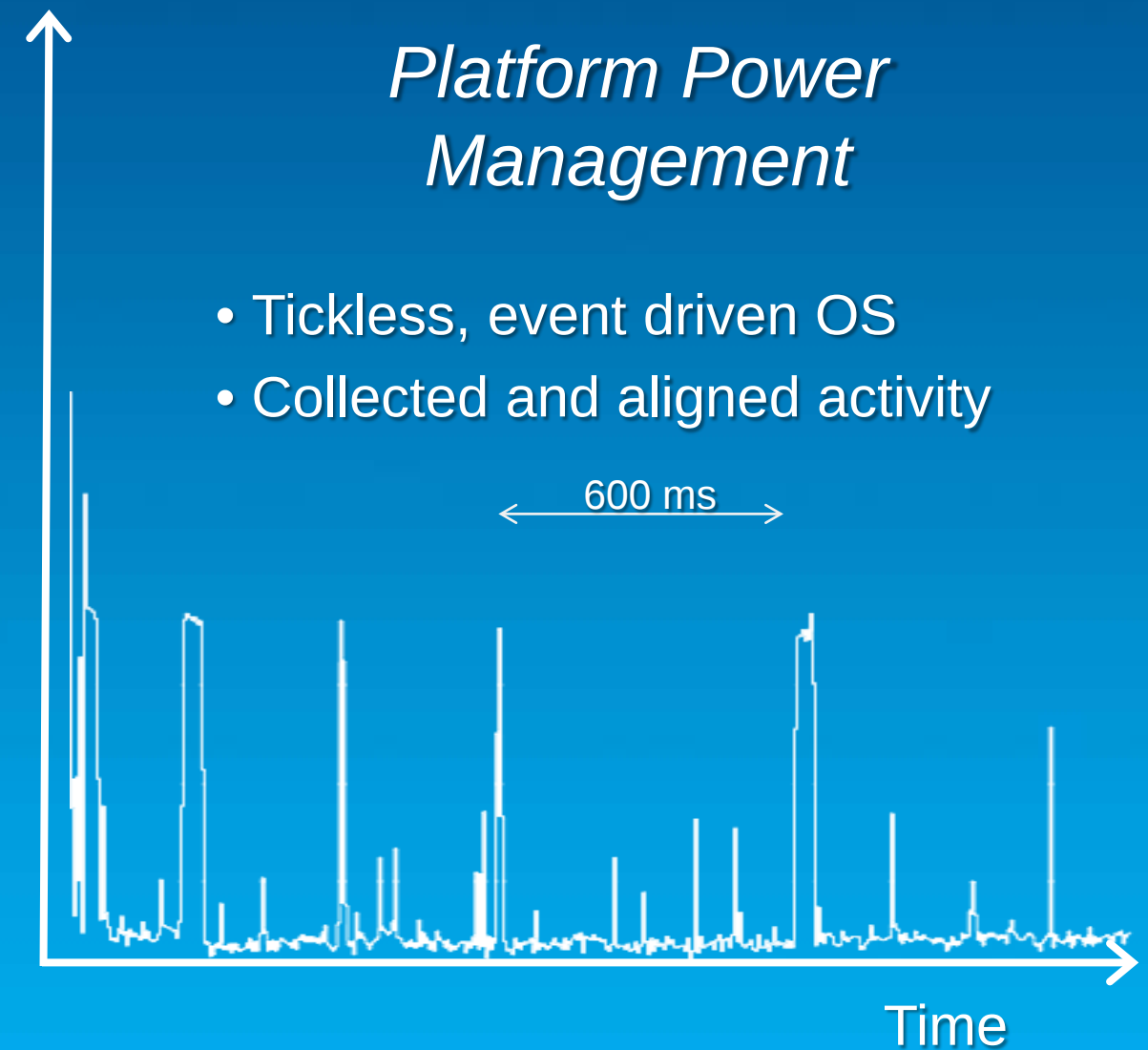
NEW

Improving Idle Efficiency

Typical Idle Power, S0 State



Improved Idle Power, S0ix State



4th Gen Intel® Core™ Delivers Breathtaking Idle Power

Idle Power Consumption with Power Optimizer



THE WALL STREET JOURNAL. Jun 18th, 2013

*"Intel has **pulled off a Major Gain in battery life** with its new Forth Gen Core processor"*

—Walt Mossberg, WSJ

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

Source: Intel internal power data on reference system

Battery Life with Epic Endurance

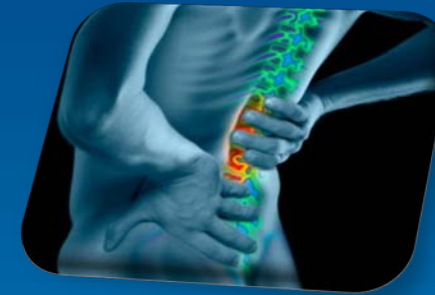


Travel from New York to Amsterdam and get all your productivity tasks completed on a single battery charge.¹

¹ Measured using: MobileMark* 2012 Office Productivity on Intel® Core™ i5-4200U Processor based OEM system, Intel® Core™ i5-3317U Processor based OEM system, and Intel® Core™2 Duo Processor P8600 based OEM system – system configurations and disclaimers in appendix. Performance rating=115 for latest Ultrabook™ vs. 108 for prior gen. vs. 80 for old PC. Battery size normalized to 50WHr.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more information go to <http://www.intel.com/performance>

Thinner, Lighter, Cooler Designs



Old Laptop
Intel® Core™2 Duo Processor
P8600

7lb bowling ball

New
Ultrabook™
(~2.8 lbs)



1.3 liter water
bottle (~3.3lbs)



Intel® Core™ i5-4200U Processor

New system: OEM system with Intel® Core™ i5-4200U Processor

4+ Year old system: OEM system with Intel® Core™2 Duo Processor P8600 - system configurations and disclaimers in appendix

4th Generation Intel® Core™ Processors

Enhanced Graphics and Media



NEW Intel® Iris graphics - up to 2x performance¹ in Ultrabooks™

NEW Intel® Iris™ Pro graphics with Integrated on-package EDRAM memory

NEW API Support: DX11.1, OpenCL 1.2, OpenGL 4.0



NEW 3 screen collage display¹

NEW Enhanced 4K x 2K support

NEW 2x bandwidth with Display Port 1.2



NEW Faster Intel® Quick Sync Video¹

NEW Faster JPEG & MPEG decode

NEW OpenCL 1.2 Support

¹ See appendix for benchmark configurations and details

NEW EXPERIENCES

ULTRABOOK™ 2-IN-1 WITH 4TH GENERATION INTEL® CORE™ PROCESSORS



acer

ASUS®



lenovo

Panasonic

SONY®

TOSHIBA

asQED
Symposium 2013

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CREATIVE SENZ3D™



Enabling Natural Interactions

Available soon from:

Dell & Lenovo

asQED
Symposium 2013

CONTEXT-AWARE COMPUTING

Who Am
I With?

How Am I
Feeling?

Why Am
I Here?

What Am
I Doing?

Where
Am
I Going?

When Do
I Need
To Leave?



A fundamental change

“ Finally there’s one processor that gives us what we want *and* what we

Mike Feibus, Technology Strategies

4 Year Old Laptop



VS.



Ultrabook™ 2-in-1
4th Generation Intel® Core™



Get Work Done **~1.8x Faster**

Convert Videos **~23x Faster**

Play Popular Games **26X Faster**

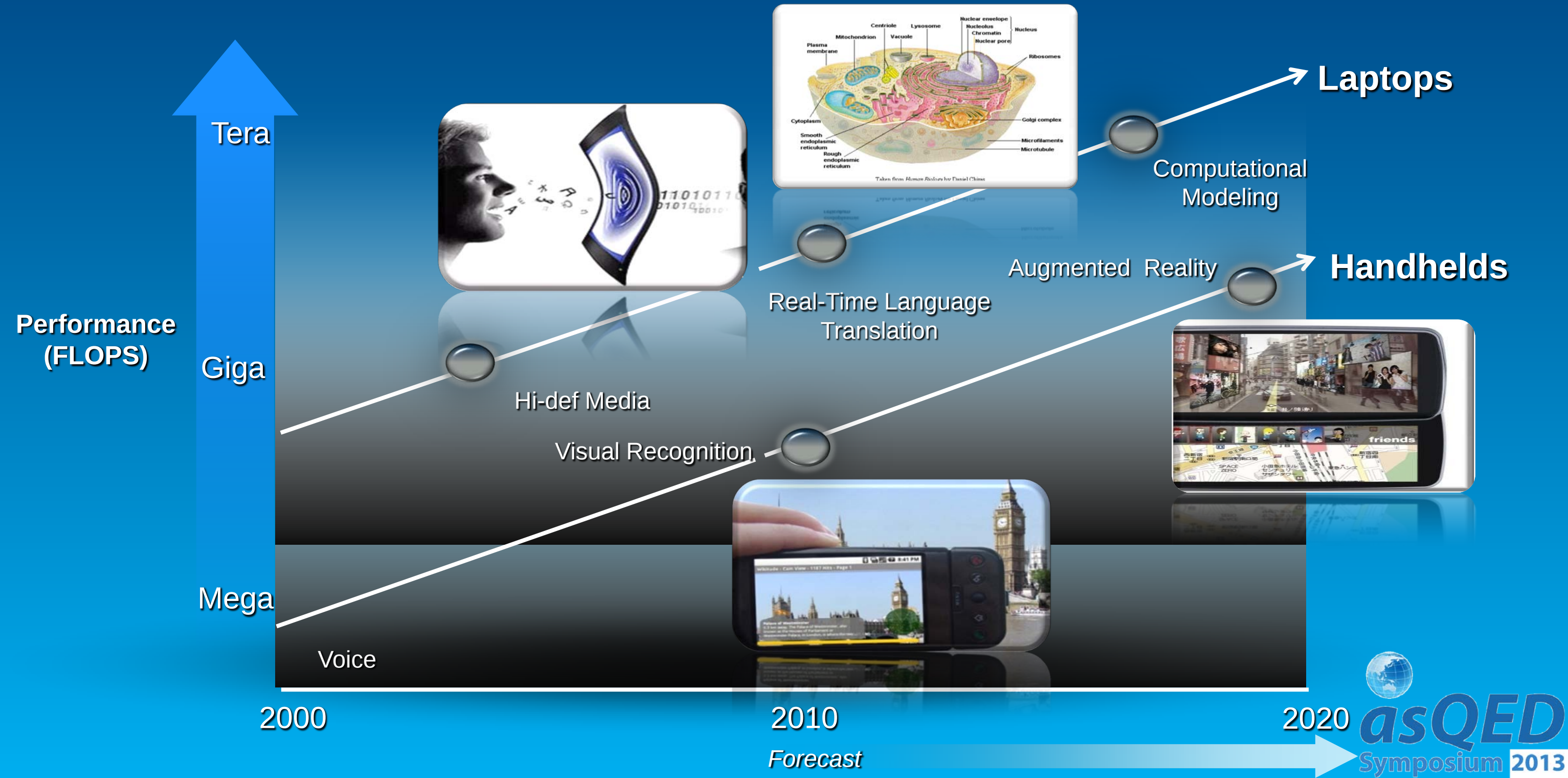
Wake Up and Go **>8X Faster**

Watch HD Movies **3X Longer**



**>50% Thinner
&
>50% Lighter**

New Usages Demand More Performance



More Use Driving MORE TRANSISTORS Transistors Worldwide

Quintillions
1,200



We are here



Thank You