

Redefining Mobility

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Mobility Today



- Local Applications
- Form Factor-driven I/O
- Limited View of Internet
- Fixed User Interface
- Location-aware
- Wired Sync

Mobility Tomorrow: *What People Want*



Today

Local Applications

Touch I/F

Form Factor driven I/O

Limited View of Internet

Location-aware

Wired Sync

Tomorrow

+ Web Applications

Gestures & Voice I/F

Nearby Device driven I/O

Uncompromised
Internet Experience

Location Relevance

Wireless Sync

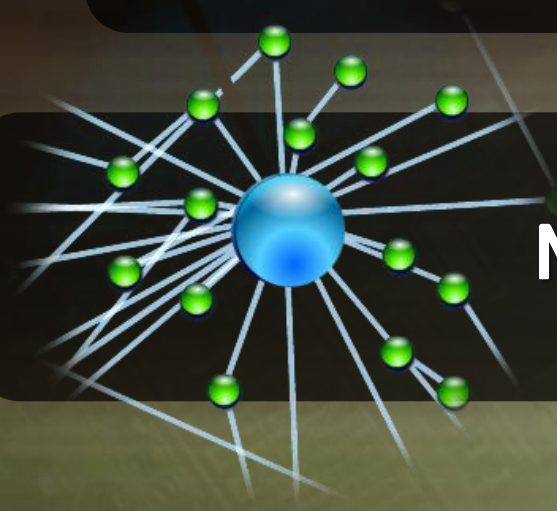


Redefining Mobility

More **Powerful** Mobile Devices



More **Aware** Mobile Devices



More **Personal** Mobile Devices



Carry Small, Live Large



A New Vision For Our Future...

Carry Small: More Performance, Smaller Platform



A Vision of tomorrow's mobile device:

- Carry essential computational resources
- More compute & graphics power
- Anytime, anywhere connectivity
- Sensors to understand world around you
- Platform-wide power efficiency



Live Large: Better Experience

That knows No Bounds...

- Delivers amplified, more robust mobile experience
 - Seamless access to new Devices, Networks and Services
 - Understands & Anticipates what you want to do



Living Large

Wireless Docking



Wireless Display



Multi-Display Gaming



Conference Room



Personalized Shopping



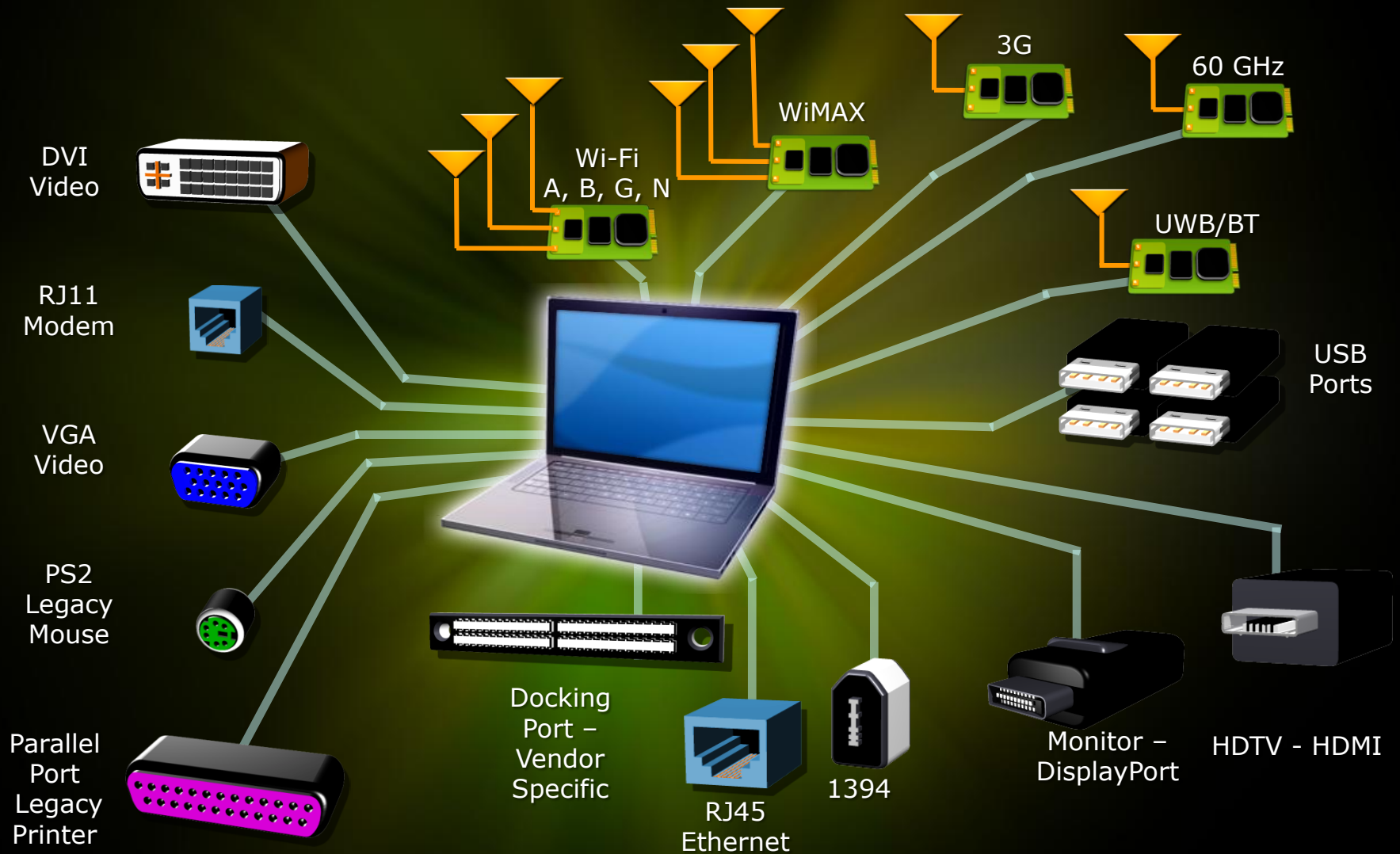
Travel Advisor





Making CSLL Real: What's the Technology?

To Carry Small, We Must Transform Connectivity

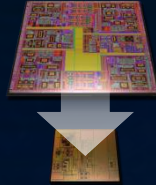


Technologies for Multi-Radio Integration

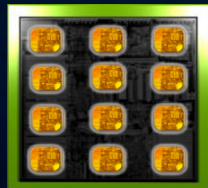
Tunable Front End
Modules / Antenna



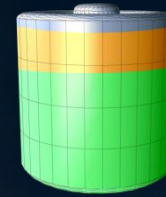
Digitally
Enhanced Radio
RFIC



Scalable
Communication
Core - PHY/MAC



Radio Platform
SoC
RFI Mitigation



Energy Efficient
Communications



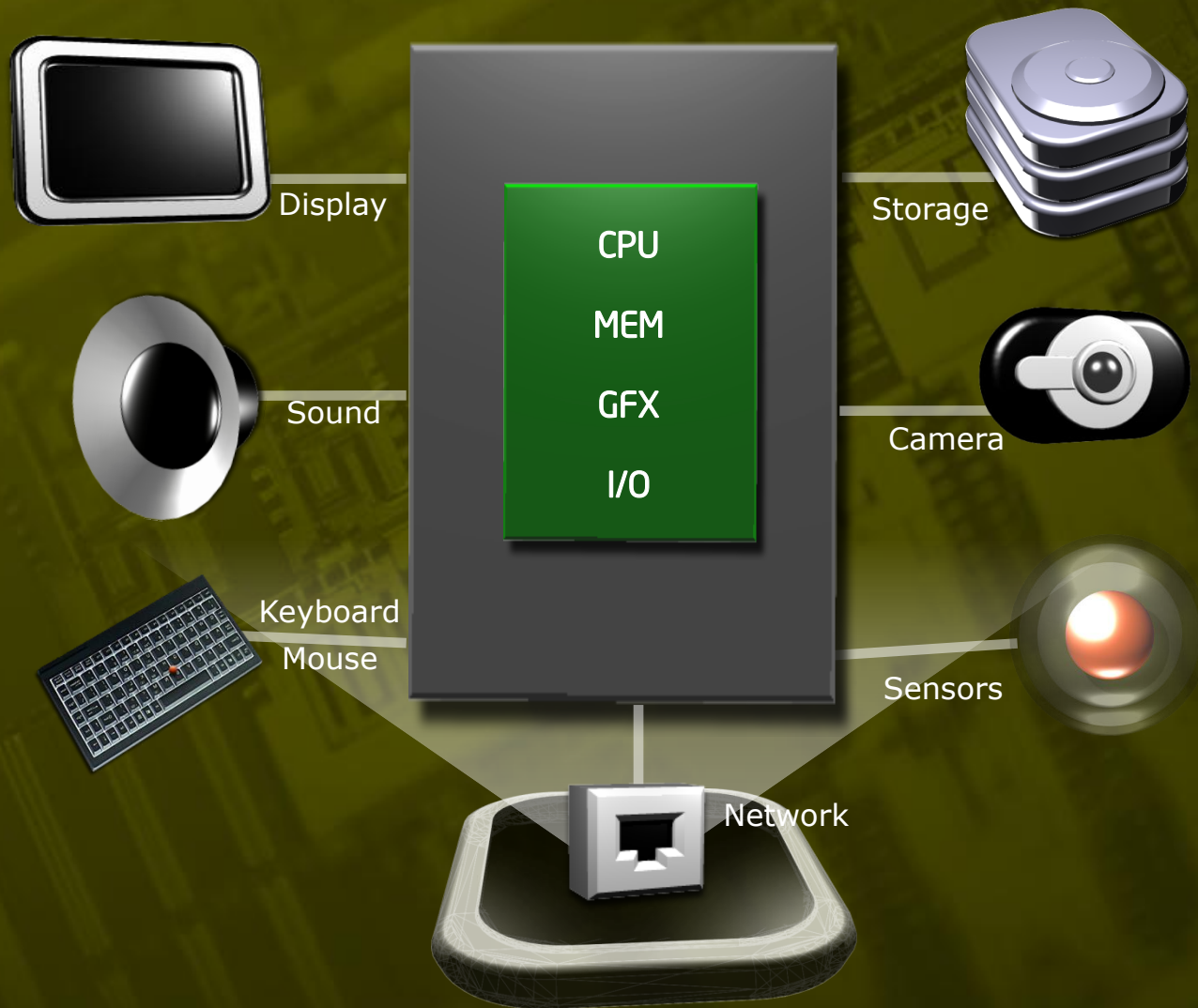
Seamless
connectivity



Standards

Keys: Size, Efficiency, Flexibility

Traditional Mobile Device



Enrich the Mobile Experience with Nearby Devices



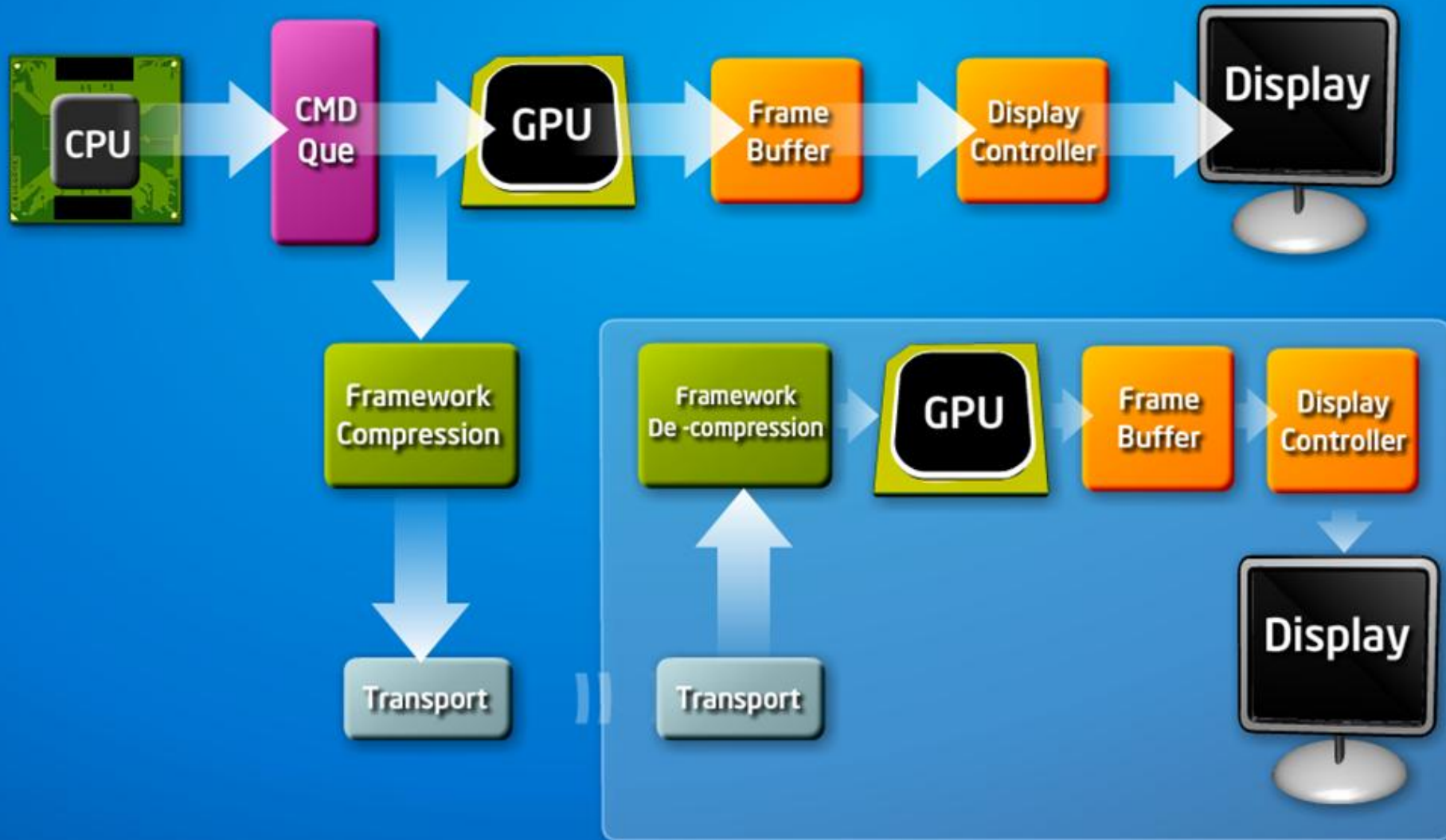
Dynamic Discovery of Nearby Devices

- Wireless discovery of sleeping devices
- Request connections when needed

Easy and Secure Connection Setup

- Pin entry or NFC touch

Remote Graphics Rendering



(flash animation)

Anticipating What You Want: Context Awareness

Sensing

Inference

Decision

Action

Goal: Human supervised experience, not human controlled

What will it Take to Realize the Vision?



Industry cooperation

Standards

Technology convergence

Industry Taking Divergent Paths...

"**Toshiba** announced a single-chip CMOS 60-GHz receiver." †

"**Philips and Sony** are gearing up to use different proprietary versions of UWB." †

"**Panasonic** and perhaps others, including Toshiba, will pass on Wireless USB in favor of 60GHz radios." †

PALO ALTO, CALIF. - Dec. 10, 2007 - **DisplayLink and Alereon** today jointly announced the availability of a reference design for a Wireless USB display adapter that allows PCs to connect to nearby standard displays without wires
[DisplayLink Press Release]

"**Samsung and Hewlett-Packard** have plans for the Wireless USB variant of UWB." †

"**Sony** also may use proprietary versions of Wi-Fi, based on demos at last week's Consumer Electronics Show." †

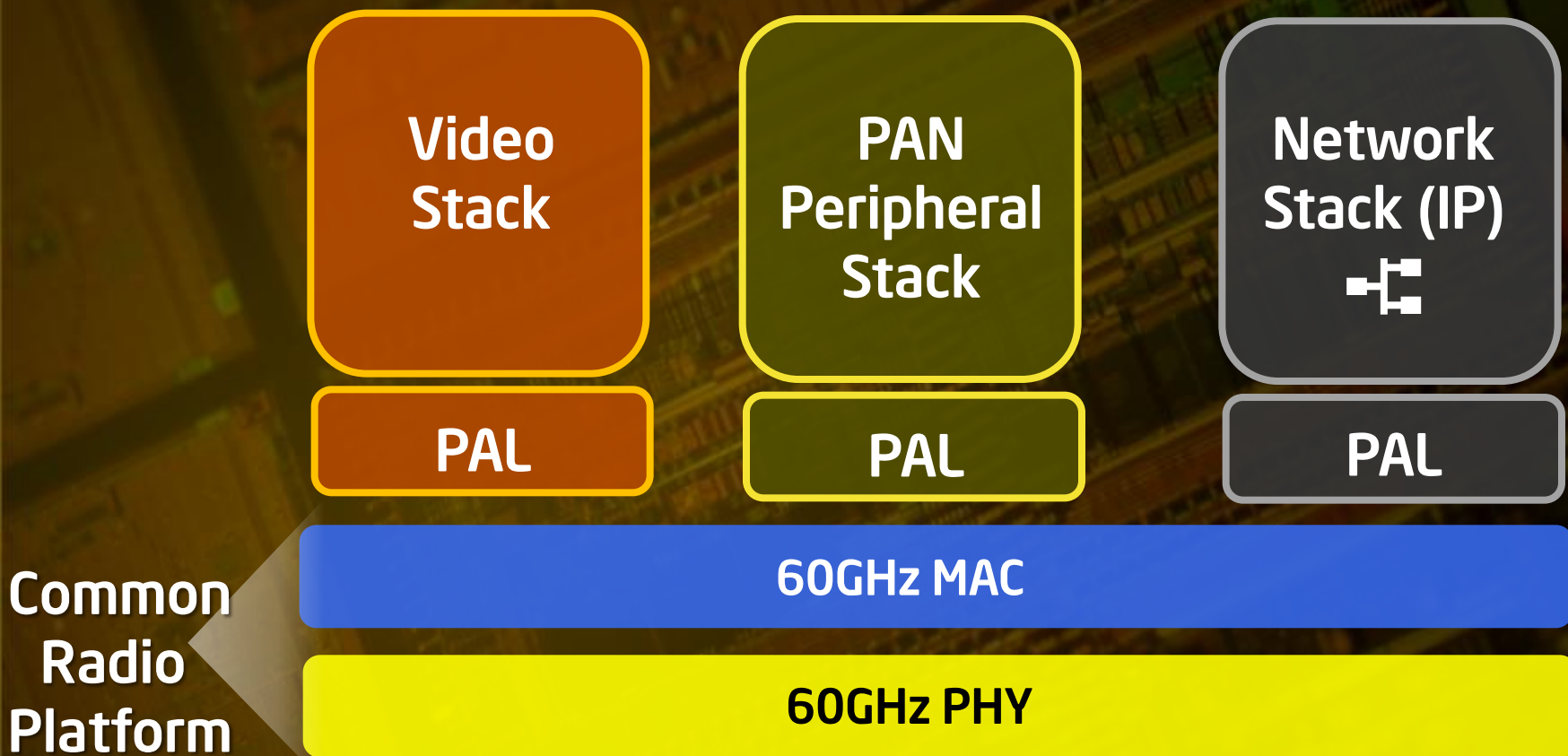
"**LG Electronics** will at least initially use Wi-Fi." †

Sources:

† EE Times, "CE's wireless Babel: Connectivity strategies are all over the map", January 14, 2008, by Rick Merritt and Junko Yoshida

‡ Electronic Design, "60-GHz CMOS Transmitter Stimulates Millimeter-Wave Developments", September 13, 2007

Architect Convergence to Accommodate Divergent Requirements

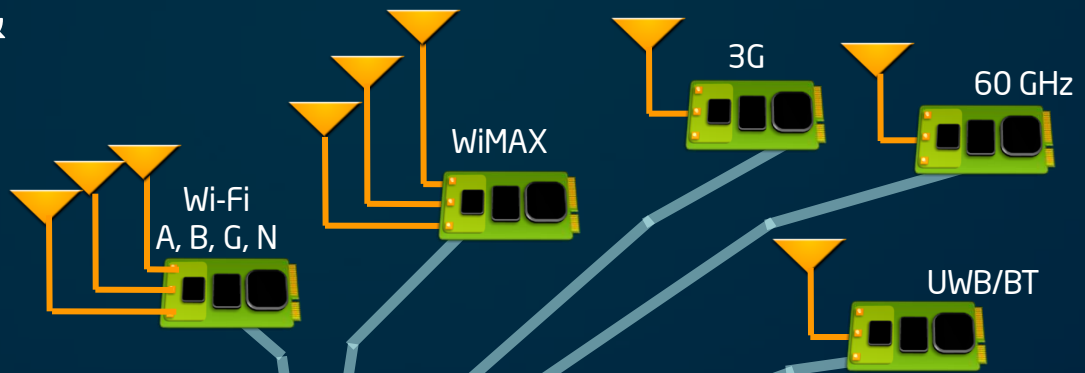


Example Approach for Short-Range Wireless

A Vision for Consolidated Platform I/O

Multi-radio Integration & Wireless PAN Unification

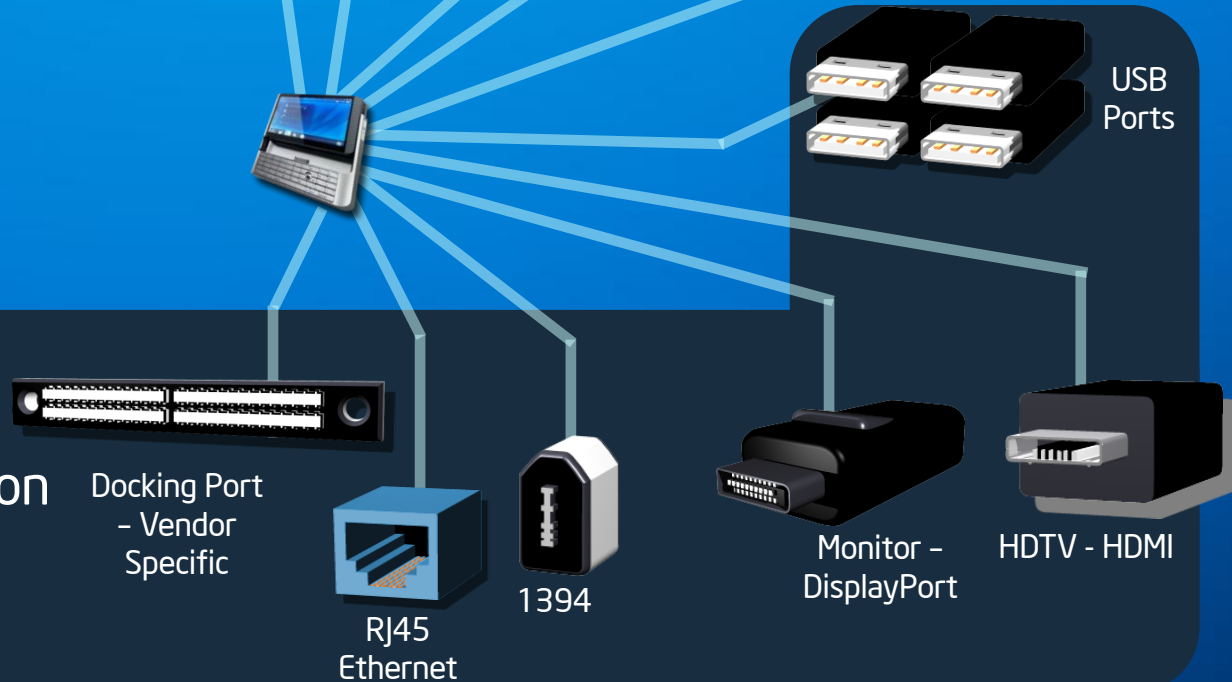
One logical network
Best radio selection



Wireless I/O

Universal Port (fiber)

Plan for the coming transition
to cost-effective fiber

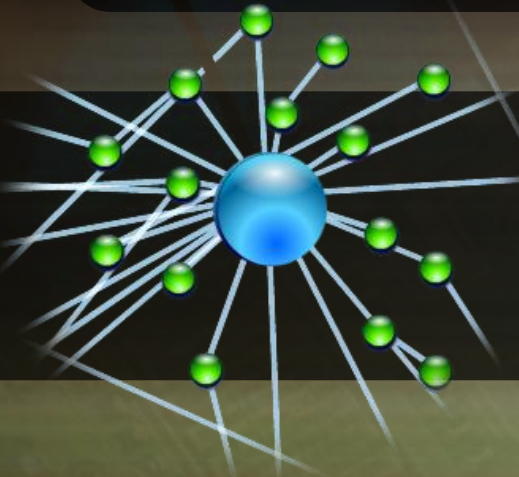


Carry-Small Live-Large: The New Definition of Mobility

More **Powerful** Mobile Devices



More **Aware** Mobile Devices



More **Personal** Mobile Devices



**Users & companies will benefit from
convergence and standards that will
enable the future of mobility**



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