



# COMMUNICATIONS DESIGN CONFERENCE

## Birds-of-a-Feather Panel Discussions UWB: When, Where, and Why?

San Jose – 1 October 2003



**Mr. Jason Ellis**

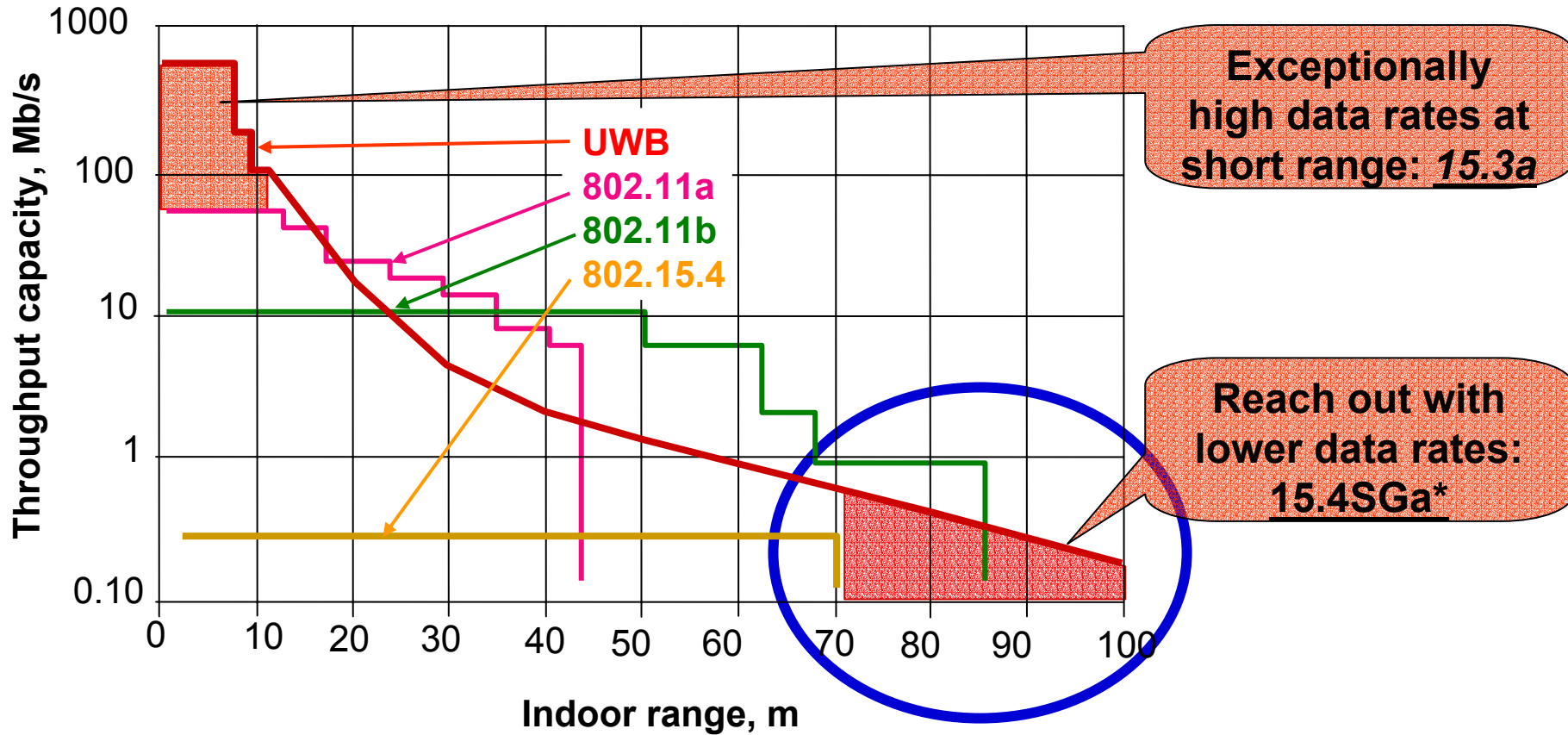
*Vice-Chairman, IEEE 802.15.4SGa*

*Past Technical Editor, IEEE 802.15.3a*

*Sr. Business Development, General Atomics*

[jsnellis@ieee.org](mailto:jsnellis@ieee.org)

# Where UWB Fits in Wireless PANs



**\*802.15.4SGa has not yet evaluated PHY technologies, but many expect UWB to prevail**

UWB Low Rate Tutorial – [http://web.gat.com/photonics/uwb/images/pdf/wg\\_understanding.pdf](http://web.gat.com/photonics/uwb/images/pdf/wg_understanding.pdf)

# Substantial Demand for Low Rate UWB Sensor Networks

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- **Additional capabilities over existing 802.15.4 standard enable new applications and markets**

- **Commercial**

- » **Asset tagging and management**
- » **Industrial and building automation**
- » **Smart home – personalized services**



- **Humanitarian**

- » **Locating missing children**
- » **Improving fire fighter safety**



- **Emerging applications require new features**

- **Precision location capability (cm accuracy)**
- **High aggregate throughput (high density of sensors)**
- **Scalability to data rates, range, power consumption, cost**

- **Early Participation:**

- **Technology Developers, Semiconductor Manufacturers, Consumer Electronic Companies, Non-Profit Organizations**

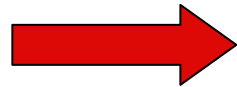
# Update on IEEE Standardization – 802.15.4SGa

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## Current Project Timeline

Nov 2003	Interest Group 15.4a Started
Mar 2003	UWB Tutorial Given to 802 Committee
July 2003	Study Group 15.4a Approved
Sept 2003	Call For Applications Issued ( <b>open till 7 Nov. 2003</b> )
Sept 2003	Planning Sessions / CFA Responses / UWB Channel Model
Nov 2003	<b>CFA Responses / Tech. Requirements / PAR &amp; 5C</b>
Jan 2004	<b>Tech. Requirements / PAR &amp; 5C</b>
Mar 2004	<b>Draft Selection Criteria / PAR &amp; 5C</b>
May 2004	<b>Form Task Group 802.15.4a*</b>
July 2004	<b>PHY Proposals</b>
Mid 2005	<b><i>Possible Standard Ratification</i></b>

\* Assumes PAR & 5C warrants new standard



IEEE 802.15.4SGa Webpage: <http://www.ieee802.org/15/pub/SG4a.html>

### Active participants include:

#### **Aetherwire & Location**

Infineon  
Motorola  
Renesas

**Staccato Communications**

#### **General Atomics**

Maxim  
Philips  
Samsung  
Texas Instruments

IBM

Mitsubishi  
Pulsicom

**ST Microelectronics**

Ubisense Limited