

Bluetooth: Value Adds and Opportunities

Jeff Stripp
Vice President, Sales
Jstripp@mindbranch.com
t: 413.662.1139
f: 413.664.9343



Introduction:

What is Bluetooth?

The bluetooth technology eliminates the need for numerous and inconvenient cable attachments for connecting computers, mobile phones, mobile computers, and handheld devices.



the bluetooth symbol

The idea is to create a single digital wireless protocol to address end-user problems arising from proliferation of various mobile devices.

In short, it is a wireless replacement for many of the cables we currently use to transmit voice and data signals.

According to Bluetooth SIG, it is the fastest growing industry standard ever as more than 1,300 manufacturers have joined the bluetooth family.

Bluetooth technology is the result of the joint achievements of nine leading companies:

3COM®

Lucent Technologies
Bell Labs Innovations



intel.

Microsoft®

 **MOTOROLA**

NOKIA
CONNECTING PEOPLE

ERICSSON 

TOSHIBA



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Uses of Bluetooth Technology:

- * **Phones/Pagers**
- * **Modems**
- * **LAN Access Devices**
- * **Headsets**
- * **Notebooks, Desktop, and Handheld Computers**



Competing Bluetooth Technologies:

- ▶ IEEE 802.11 standard
- ▶ Infrared Technology (IrDA)
- ▶ HomeRF

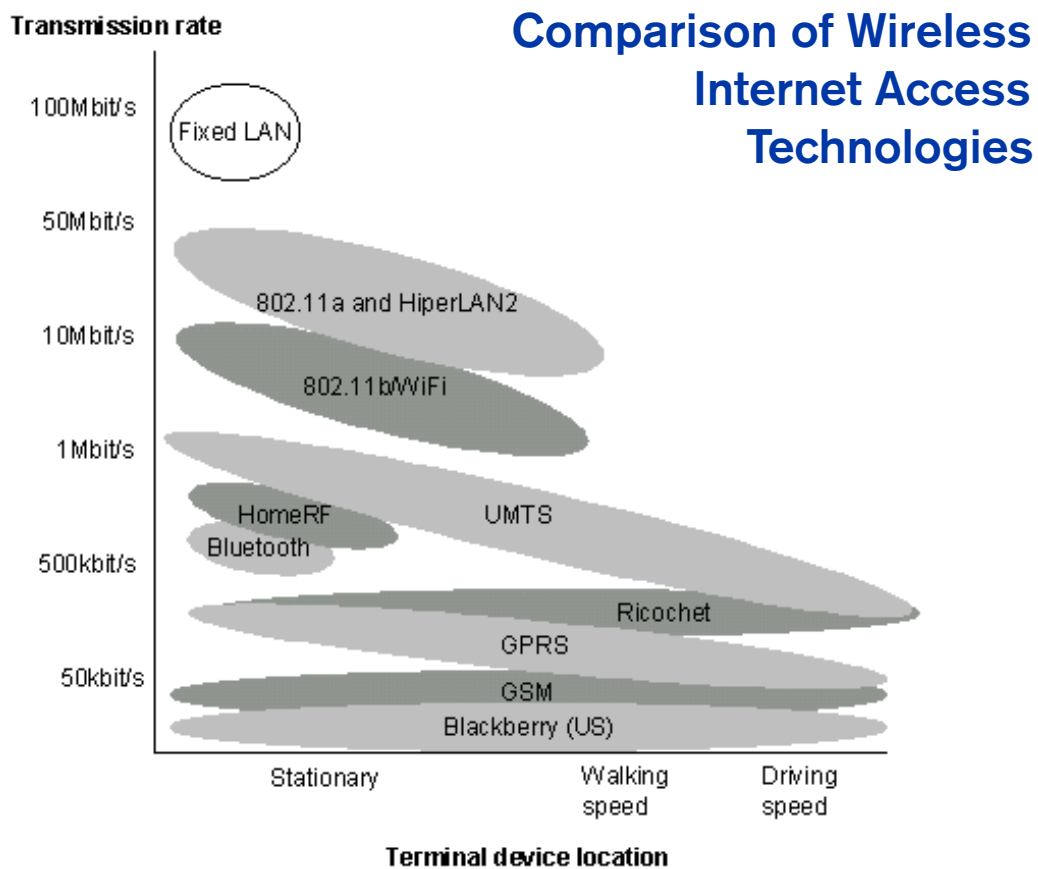
A brief comparison between these technologies:

	Peak Data Rate	Range	Relative Cost	Voice Network Support	Data Network Support
IEEE 802.11	2 Mbps	50m	Medium	Via IP	TCP/IP
IrDA	16 Mbps	< 2m	Low	Via IP	Via PPP
Bluetooth	1 Mbps	< 10m	Medium	Via IP and Cellular	Via PPP
HomeRF	1.6 Mbps	50m	Medium	Via IP and PSTN	TCP/IP

Puneet Gupta, MobileInfo.com

Comparison of wireless Internet access technologies

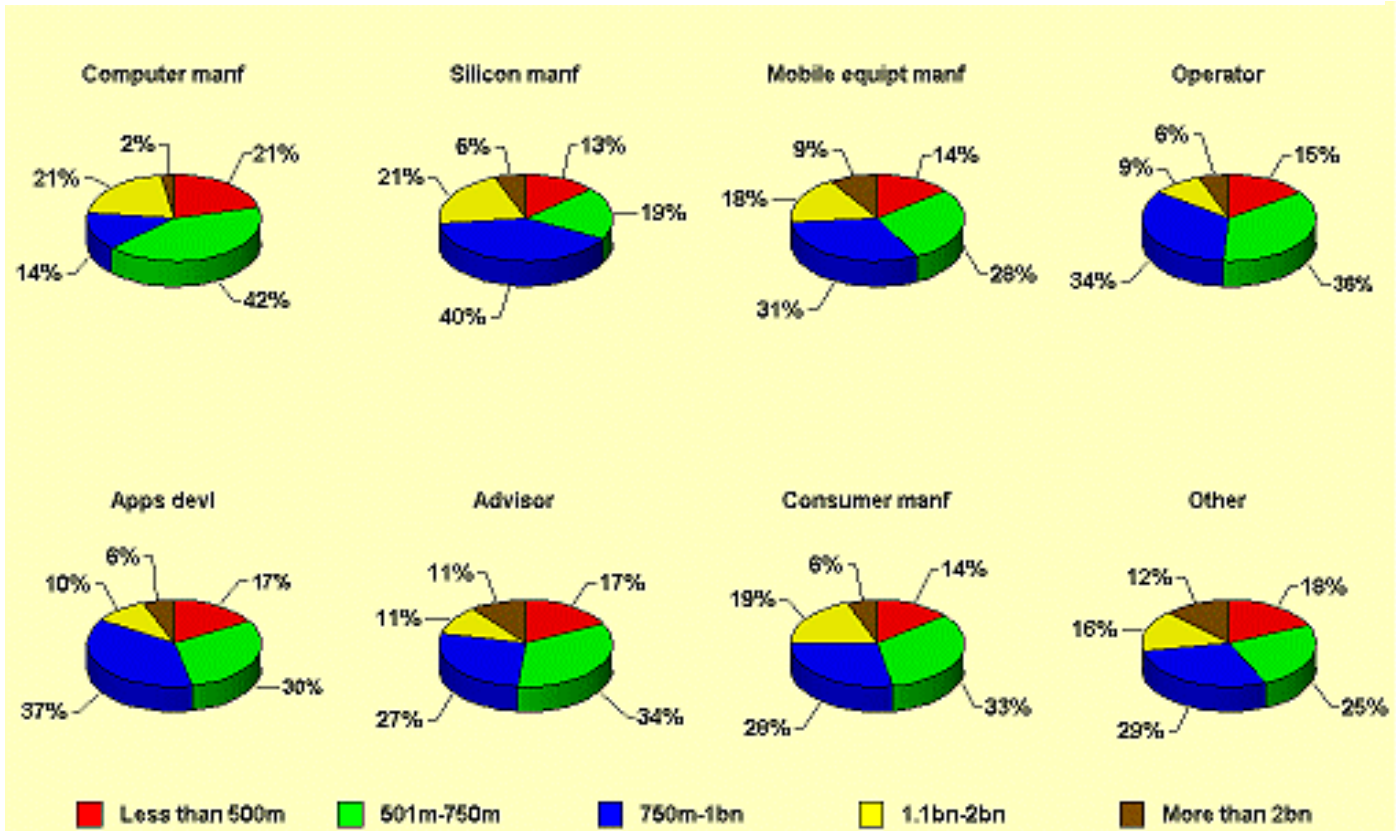
According to new research by Datacomm Research, Bluetooth offers the most economical solution for low-to-medium-speed device connectivity. Infrared's (IrDA) window of opportunity has passed. The 802.11 standards will dominate high-speed applications, but Bluetooth should achieve far greater unit volumes.



Analysys, Ltd.

Devices: What does the future hold?

Total Number of Bluetooth Devices Forecast to be in use Globally by 2006



Source: ARC Group Bluetooth Industry Survey

“There are a myriad applications for wireless personal area networks, and there could easily be 1.5 billion Bluetooth devices by 2005,” said Michael Hentschel, Managing Director of TechVest Ventures. “But there is little profit in isolated applications; vendors must create application chains – series of interdependent tasks that together add value,” he concluded.

Are Lap-Tops Leading the Way?

According to VisionGain, the lap-top market will be the first to embrace Bluetooth, with 20% of lap-tops Bluetooth enabled by next year.



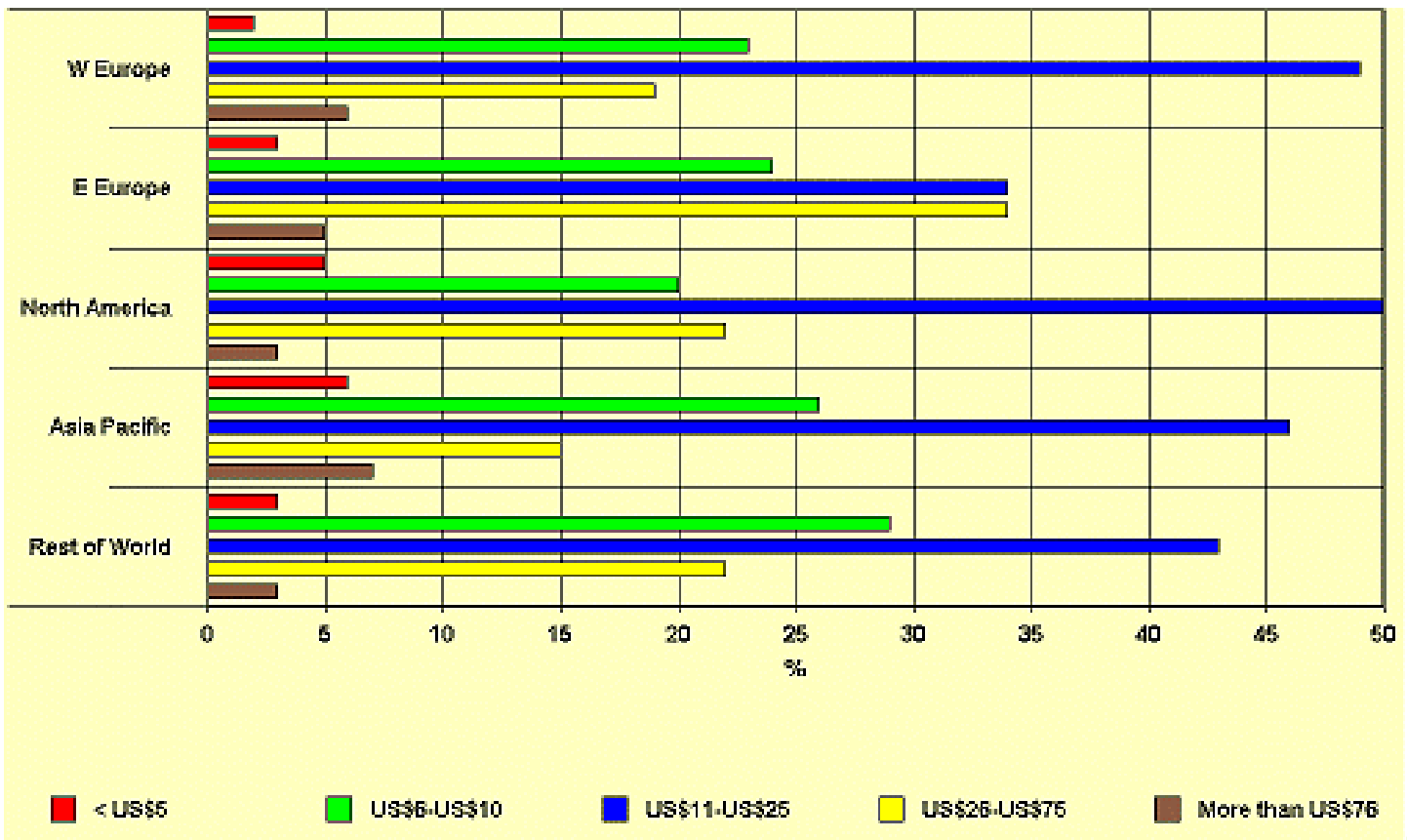
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Applications: How much influence do they really have?

According to a new study by the ARC Group, applications and cost are anticipated by all respondents to be the major influences on the take up of Bluetooth.

Predicted Price per Unit for the Inclusion of Bluetooth by the end of 2001



Source: ARC Group Bluetooth Industry Survey

“

Despite all the delays and problems it remains a very promising technology, with plenty of medium and long term applications. But the real test will be whether it survives the hype promoters are laying on it, with their unrealistic claims,” said Ben Thacker, a Senior Analyst at VisionGain. “The market for peripherals will not grow until the price of the chipset approaches its lowest (under \$10), at which point its exclusion from peripherals will probably not be cost-effective.

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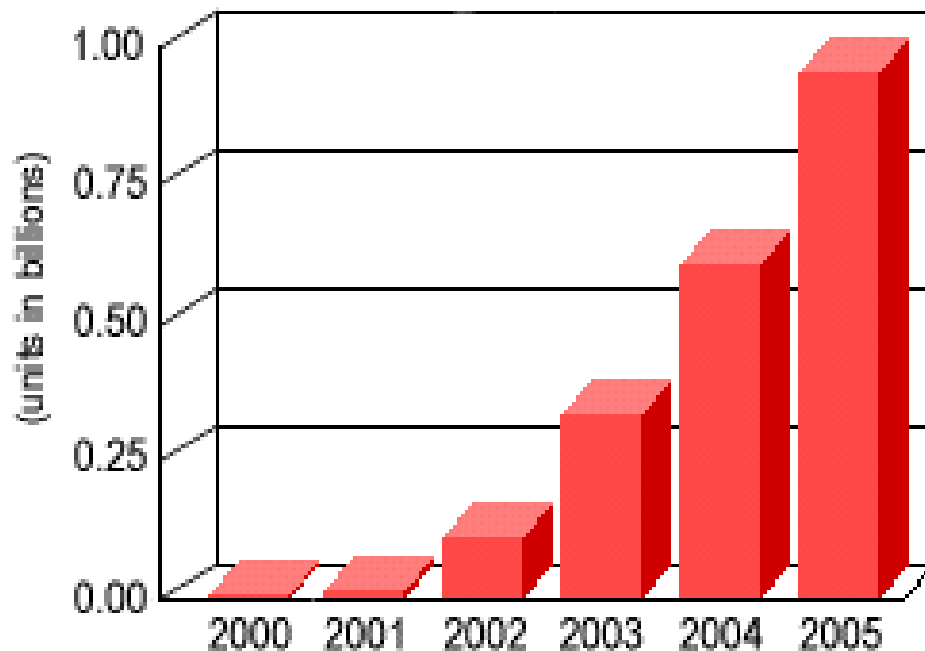


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Equipment: How will Bluetooth effect equipment forecasts?

Cahners In-Stat has estimated that equipment shipments will climb to 995M units in 2005

Bluetooth-Enabled Equipment



Source: Cahners In-Stat Group

According to Cahners In-Stat, the semiconductor opportunity in this area will also be substantial as Bluetooth radio and baseband silicon will rise to \$4.4 billion in 2005

Bluetooth Opportunities

Datacomm Research has concluded that voice applications represent a substantial opportunity for Bluetooth.

Headsets are an obvious application, but speech recognition, text-to-speech, and VXML will create new opportunities for voice-driven information access.

Bluetooth has to be able to deliver almost transparent ease of use and convenience in order for it to be the success that it has been projected at being.

WHAT ADDED VALUE DO YOU SEE BLUETOOTH BRINGING TO YOUR ORGANISATION?		
	All (%)	Users (%)
Strategic - it will help disrupt existing value chains and create major new opportunities for us	25	22
Tactical - it will deliver real advantage over our competitors in our existing operations	32	35
Defensive - everyone will use it so we have to just to remain competitive	16	18
Mixed - those using it will get some benefits but the support and maintenance costs will negate these benefits	17	19
None - its only going to replace a few bits of wire	5	4
Negative - it is a novelty that will add no serious benefit but will cost a lot to support	0	0

Mobile Streams, Ltd.



The Value of Bluetooth

In a recent survey given by Mobile Streams, Ltd., a quarter of all respondents saw Bluetooth in a very positive light as they ranked it as “a highly disruptive technology, which will upset existing value chains in their particular line of business”. Not bad for a technology that is being pitched as a form of cable replacement.



Recommended Reading:

Data on Bluetooth

MOBILE STREAMS, LTD.

Data on Bluetooth is the first report of its kind aimed at helping those implementing and deploying Bluetooth applications, services and products to gain the maximum business benefit from the technology.

Bluetooth In-depth: Applications & Strategies

DATACOMM RESEARCH

Bluetooth's prospects have been damaged by un-kept promises. This report explains how to put Bluetooth back on track, and shows vendors how to identify and target the most profitable applications. Written by a veteran venture capitalist, Bluetooth In-depth explains why participants should focus on what the author calls "application chains."

Public Wireless LAN Access: A Threat to Mobile Operators?

ANALYSYS, LTD

Examines the role that WLAN technologies will continue to play in the wireless data market and which players can extract the greatest value...



Recommended Reading:

[Access Anytime, Anywhere: Bluetooth Will “Make it So”!](#)

CAHNERS IN-STAT GROUP

The report provides detailed 5-year forecast for radio, baseband, and host-supported functional silicon solutions, semiconductor player profiles, and selected software issues and IP/design/protocol stack players.

[Bluetooth Industry Survey 2001](#)

ARC GROUP

The largest ever survey of the opinions and expectations of the Bluetooth community - Over 900 respondents!

[The Bluetooth Report 2001](#)

VISIONGAIN

Fears concerning the success of Bluetooth have much to do with this simple question: do people want it? The ambitious applications for which Bluetooth has been pointed out are sometimes useful, sometimes curious, and sometimes downright gratuitous. Those involved in the Bluetooth industry have a chance to voice their opinions over the success and failings of this very promising technology.

