

# Notes from the meeting between Bluetooth, ETSI, and IEEE

Tuesday, August 31, 1999 5:00pm-7:00pm EDT

c/o ETSI  
Monarch Hotel  
2401 M Street  
Washington DC 20037 USA

## 1. Introduction

The meeting was opened at 5:00pm by Örjan Johansson and we agreed to the following Agenda. The minutes for the meeting would be taken by each of the members Bluetooth - Chatschik Bisdikian, ETSI - Kjell Strandberg, and IEEE - Ian Gifford.

Note: This meeting was requested by the Bluetooth SIG (Örjan Johansson, Ericsson) to see to that there is a possibility for Bluetooth, ETSI and IEEE to cooperate and to write down an action list as it relates to Bluetooth standards making.

## 2. Attendees

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## 3. Meeting Agenda

- Short update and participants goals
- How could IEEE, ETSI and Bluetooth cooperate to reach goals
- Review Bluetooth SIG Bluetooth, ETSI, and IEEE "MoU" Proposal from Örjan Johansson
- What are the related next steps

## 4. Meeting Goals

- The goal of the meeting would be to see to that there is a possibility for the three of us (Bluetooth, ETSI and IEEE) to cooperate and to write down an action list.
- Present the latest Bluetooth Proposal to ETSI and IEEE.

## 5. Bluetooth Special Interest Group

Örjan Johansson provided a short background on the Bluetooth Special Interest Group.

Bluetooth background and goals:

- Increase value through unplug and play
- A number of user scenarios were created for "out of box experience"
- 1.0a is published with these features built in
- SIG has >1000 member companies (rate = 100/month)
- All promoter companies are very positive to involvement from IEEE and ETSI

The Bluetooth Qualification Review Board (BQRB) is a requirement for Logo and IPR use. Ericsson has a lot of IPR; Bluetooth gives them a way to enforce their patents against non-Bluetooth companies.

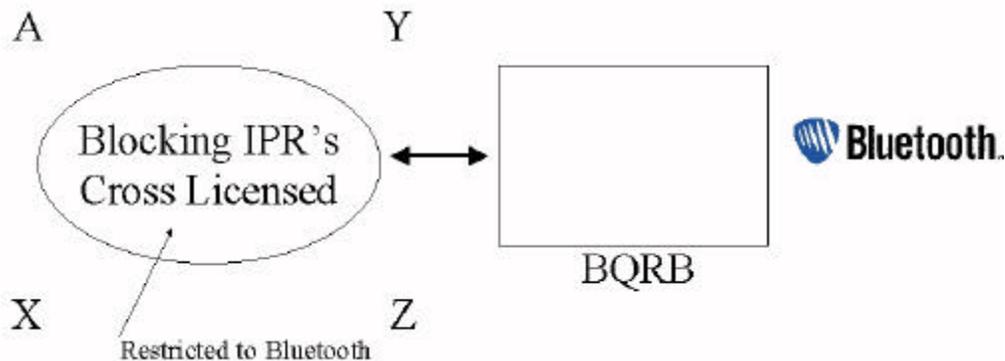


Figure 1 How SIG is set up?

Figure 1 describes how the Bluetooth SIG is set up. The Adopters are signing a patent license agreement among parties wishing to adopt the Bluetooth Specification. Specifically, the Adopter agreements state:

- Adopter hereby grants to the Promoters and to Fellow Adopters, and the Promoters hereby grant to Adopter, a nonexclusive, royalty-free, nontransferable, nonsublicenseable, worldwide license under its Necessary Claims to make, have made, use, import, offer to sell and sell products which comply with the Specification; provided that such license shall not extend to features of a product which are not required to comply with the Specification or for which there exists a feasible, noninfringing alternative.
- The Promoters grant to Adopter a nonexclusive, royalty-free, nontransferable, nonsublicenseable, worldwide license under the copyrights in the Specification to use and reproduce the Specification as necessary in order to make, have made, use, import, offer to sell and sell products which comply with the Specification.

Source: <http://www.bluetooth.com>

Nokia and Ericsson are the drivers for interoperability. IrDA did a poor job of interoperability early on.

IEEE and ETSI will provide a solid standard and can improve the quality of the specification. Ericsson is afraid of members moving outside letter and spirit of specification. Ericsson does not want to be "the bad guys". The reference for Ericsson is Ethernet and P802.3 - are the one and the same? Ericsson thinks they are different and that is worrisome.

Note 1: Bluetooth is the codename for a technology specification for small form factor, low-cost, short range radio links between mobile PCs, mobile phones and other portable devices. The Bluetooth Special Interest Group is an industry group consisting of leaders in the telecommunications and computing

industries that are driving development of the technology and bringing it to market. The Bluetooth Special Interest Group (SIG) was formed by five (5) Promoters e.g., Ericsson AB, IBM Corporation, Intel Corporation, Nokia Corporation, and Toshiba Corporation. Bluetooth technology allows for the replacement of the many proprietary cables that connect one device to another with one universal short-range radio link. For instance, Bluetooth radio technology built into both the cellular telephone and the laptop would replace the cumbersome cable used today to connect a laptop to a cellular telephone. Bluetooth radios operate in the unlicensed ISM band at 2.4 GHz. A frequency hop transceiver is applied to combat interference and fading. A shaped, binary FM modulation is applied to minimize transceiver complexity. The gross data rate is 1Mb/s. A Time-Division Duplex scheme is used for full-duplex transmission.

Note 2: BT Acronyms

BQA = Bluetooth Qualification Administrator

BQB = Bluetooth Qualification Body

BQRB = Bluetooth Qualification Review Board

BQTF = Bluetooth Qualification Test Facility

BTAB = Bluetooth Technical Advisory Board

IPR = Intellectual Property Rights

PM = Bluetooth SIG - Program Management

SIG = Special Interest Group

<http://www.bluetooth.com>

## 6. IEEE Overview

Dick provided a short overview of the Institute of Electrical and Electronics Engineers, Inc. IEEE is a not-for-profit association and has more than 350,000 (and growing) individual members in 150 countries. Through its technical publishing, conferences and consensus-based standards activities, the Institute has:

- IEEE Dec98 Membership was 334,811; 66% USA & 33% Non-USA
- IEEE produces 30 percent of the world's published literature in electrical engineering, computers and control technology,
- IEEE holds annually more than 300 major conferences and
- IEEE has more than 800 active standards with 700 under development.

<http://www.ieee.org>

## 7. IEEE-SA

Dick also described the IEEE Standards Association (IEEE-SA). The Association provides a standards program that serves the global needs of industry, government and the public. It works to enhance the acceptance and competitiveness of IEEE standards in today's changing marketplace. The IEEE Standards Association represents technological innovation, global participation and dedication to the on-going advancement and promotion of new concepts. It's responsive to worldwide standards issues and to the technical, market and competitive strategies of industry sectors.

The Association is a member-driven organization with a President and eight Board of Governors members selected by the IEEE Standards Association membership. Together they formulate policy that is carried out by members, volunteers and staff.

<http://standards.ieee.org>

## 8. IEEE 802

Dick overviewed the interface of the IEEE-SA to Project 802. The balance of the discussion revolved around the P802.15 Task Group 1 and the current status of the derivation of the draft standard from the Bluetooth v1.0A Foundation Specification(s).

Key members from the IEEE P802.15.1 are currently assisting a Bluetooth Working Group to prepare a draft standard for submission to the IEEE in Sep99. Tom Siep and Chatshik Bisdikian provided a clear status and the next steps and deliverables from this Bluetooth Working Group. The draft is expected in Sep99 after the Interim Meeting of P802.15 but before the Nov99 Plenary of 802. The Working Group expects to present a P802.15 Working Group Electronic Letter Ballot in early Oct99 with a Comment Resolution in Nov99 during the 802 Plenary.

<http://grouper.ieee.org/groups/802/>

## 9. ETSI

ETSI has a firm interest in Bluetooth upper layers. IEEE and ETSI have MoU. Believe that we have a good basis on which to build.

ETSI Secretariat needed to know how serious Bluetooth is. The will on the part of ETSI Secretariat is there but they need to determine what the ETSI Members want.

The discussion of how should the deliverable be processed and what approval procedure should be used was debated. Some of the solutions discussed were:

- Treat the specification as a work item in a Technical Body e.g., BRAN Project
- Use the route of direct Membership Approval Procedure for ETSI ESs
- Use the PAS procedure
- Create a Partnership Project
- Etc.

Meeting of ETSI board this week, depending on discussions this week, find the best way to deal with the work. There will be some editing needed; that process needs to be worked out. ETSI needs to clarify matters internally, but it should work.

Karl Heinz ETSI: Asked if the test specifications were part of what will be standardized? Mid next year Bluetooth will have test specifications.

The Bluetooth Qualification Review Board (BQRB) will be the author and maintain test specification. Ericsson and Nokia have used the GSM model to create the qualification testing process. Will be other drafts based on errata. Not necessary to agree on details ETSI needs to go back and consider how to proceed. New category (promoters get dropped now and then) Principal contribute but not vote in the insiders group. This is for other organizations rather than companies. Maintain speed of WG but have outside inputs.

ALTERNATIVE ETSI: partnership to go forward (establish framework, work in cooperation). This is especially important for new work/changes in the spec.

Note 1: Acroynms

ETSI = European Telecommunications Standards Institute

EN = European Standard (telecommunications series)

ES = ETSI Standard

ETS = European Telecommunication Standard

ICS = Implementation Conformance Statement

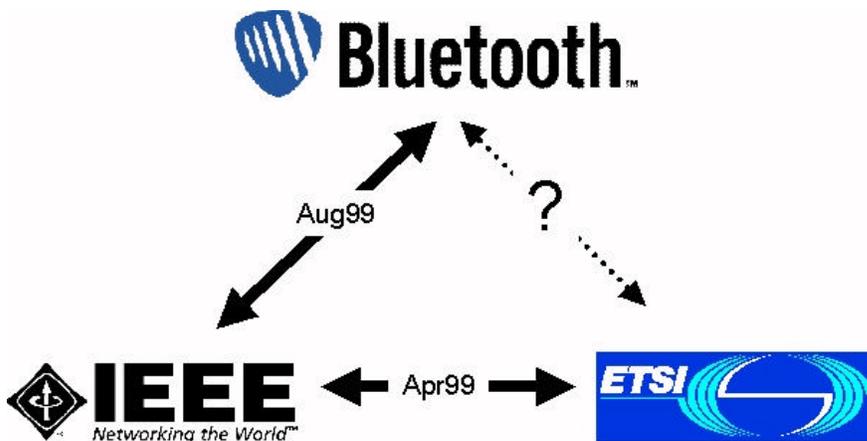
IPR = Intellectual Property Rights  
 SDL = Specification and Description Language  
 TS = ETSI Technical Specification  
 TTCN = Tree and Tabular Combined Notation

<http://www.etsi.org/>

## 10. Open Discussion

The group discussed the Proposal from Bluetooth SIG and the ETSI Delegation began to discuss the wording as they intended to present the revised Proposal to the ETSI Board this week.

Dick Holleman indicated that the following (see Figure 2) explicit relationships exist:



**Figure 2 The Explicit Relationships, a Troika in the making**

Note 1: IEEE to Bluetooth SIG - License Agreement to Publish Derivative Work, signed by JimK 11Jul99 & JudyG 11Aug99. The BSIG is reviewing an IEEE JudyG edit; need a final initialed copy.  
 Note 2: IEEE to ETSI - Co-operation Agreement Between ETSI and IEEE-SA signed Apr99.

Dick went on to suggest that Bluetooth has everything to gain and nothing to lose from the SDO (Standards Development Organization) interest.

## 11. Next Steps

The following will summarize the next steps from this meeting:

| WHAT  | WHO                   | WHEN         |
|---|-----------------------|--------------|
| Send out minutes from meeting   | Ian Gifford           | 6Sep99       |
| Send Kjell Strandberg a hardcopy & softcopy of the Bluetooth/IEEE Copyright License Agreement                             | Ian Gifford           | 31Aug99-Done |
| Provide Karl Heinz Rosenbrock with five (5) IEEE 802 LAN/MAN Standards 1999 Edition CD-ROMs                               | Ian Gifford/Tom Siep  | 31Aug99-Done |
| Continue IEEE Liaison with Bluetooth & ETSI   | Ian Gifford           | ongoing      |
| ETSI to advise IEEE-SA and Bluetooth on the Board results on supporting the Bluetooth Upper Layer Standards Making effort | Karl Heinz Rosenbrock | Sep99        |

## 12. Conclusion

Dick Holleman thanked the IEEE'ers for their attendance and preparation for this meeting. Dick also thanked Örjan Johansson and the Bluetooth Team as well as Karl Heinz Rosenbrock and the ETSI Team for their continued interest in the IEEE. Good meeting for Industry and the SDO's.

The meeting was adjourned at 7:05pm EDT. A small group remained to edit the Bluetooth to ETSI Proposal (see item #12 below).

## 13. Post Meeting Dinner Conversation

During the 31Aug99 dinner meeting Christopher Corbett, ETSI of Marketing & Distribution, Tom Siep, and Ian Gifford discussed how the ETSI deliverable could be processed, what approval procedure should be used, and what the relative merits of the following entities were:

- Treat the specification as a work item in a Technical Body e.g., BRAN Project
- Use the route of direct Membership Approval Procedure for ETSI ESs
- Use the PAS procedure
- Create a Partnership Project
- Etc.

The summary of the conversation was that the three (3) of us did not have a complete understanding of the exact charter for some of the existing entities e.g., BRAN Project. However, Ian Gifford offered that the BRAN Project was primarily a mirror of the 802 LMSC specifically (802.11,.16) and that it might be a technical resource vs. the actually Technical Body that addresses the Upper Layers of the Bluetooth derived Standard. The point being is that the BRAN Project is chartered to conduct standards-making in the Data Link and Physical Layers; just like IEEE 802.

Here is a quick summary of the BRAN Project.

<snip>

ETSI BRAN (Broadband Radio Access Networks) Project

In response to growing market pressure for low-cost, high capacity radio links, the European Telecommunications Standards Institute (ETSI) has established a new standardization project for Broadband Radio Access Networks (BRAN).

This project will provide facilities for access to wire-based networks in both private and public contexts by the year 2000. The BRAN project will address wireless access systems with bitrates of 25 megabits per second or more and operating in either licensed or license exempt spectrum. These systems address both business use and residential access applications. Fixed wireless access systems are intended as high performance, quick to set up, competitive alternatives for wire-based access systems.

After the completion of HIPERLAN Type 1 Functional Specification, BRAN standards are being developed for three types of Broadband Radio Access Networks: HIPERLAN Type 2, HIPERACCESS and HIPERLINK.

The specifications to be developed will address the physical (PHY) layer as well as the data link control (DLC) layer (with medium access and logical data link control sublayers as appropriate). Interworking specifications that allow broadband radio systems to interface to existing wired networks, notably those based on ATM and TCP/IP protocol suites, will also be developed.

The BRAN project is intended to assist regulatory bodies with issues such as the requirements for spectrum and the radio certification specifications that will be required to implement the new broadband radio networks.

To ensure overall coherence with other existing and emerging technologies, close relationships have been or are being established with the ATM Forum, the IEEE Wireless LAN Committee P 802.11a and 802 N-WEST, the Internet Engineering Task Force, the MMAC-PC High Speed Wireless Access Systems Group, the International Telecommunication Union Radio sector (ITU-R) and a number of internal ETSI Technical Bodies.

Mr. Karl-Heinz Rosenbrock, ETSI's Director General, comments:

"The BRAN initiative is an important building block in Europe's contribution to the Global Information Infrastructure. It will draw on ETSI's comprehensive knowledge in the area of advanced radio technologies".

</snip>

We discussed the a few other known activities e.g., SMG (Special Mobile Group) Technical Committee that is responsible for GSM, SMG2 Radio, SMG3 Network, or a new SMGx. We also discussed the newly formed 3rd Generation Partnership Project (3GPP), etc. In the final analysis the ETSI Board and their Members will decide on where the ETSI deliverable will be processed.

## **14. Draft Proposal For ETSI & IEEE (dated 31Aug99, 7:30pm)**

The following Proposal was edited by Örjan Johansson, Chatschik Bisdikian, Kjell Strandberg, Tom Siep, and Ian Gifford after the main meeting adjourned on 31Aug99.

<snip>

Following previous discussions and the meeting in Washington DC August 31:st this is the to reconfirm the Bluetooth SIG wish to co-operate with ETSI and IEEE in publishing the Bluetooth specification. The collaboration between ETSI, IEEE and Bluetooth should be organised to maximise the benefits of our members of the three organisations. We therefore have jointly created a number of very preliminary positions of how to co-operate to jointly increase the quality and value of the specification.

- a) The Bluetooth SIG (special interest group), currently consisting of more than 1000 companies, agrees to give IEEE and ETSI copyrights to the Bluetooth 1.0 draft foundation specification.

It is intended that IEEE and ETSI will publish the specification after editing and agreed changes with Bluetooth.

- b) The Bluetooth SIG wants to review marketing material with IEEE/ETSI. The purpose and intent of this is to ensure that all three parties successfully can be recognised in their respective marketplace and where there is market overlap the market messages are complementary.
- c) IEEE will address the lower layers (physical and data link) and ETSI the remaining levels.

Note

The Bluetooth certification process in combination with royalty free licence will secure that the IEEE and ETSI standards will be interoperable with the original Bluetooth 1.0 draft foundation specification.

The Bluetooth SIG is also in ongoing discussions with ETSI on interoperability and conformance issues.

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## 15. Attendance List w/ Detail

|   |  |
|---|--|
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