ZigBee Alliance

Project	ZigBee Alliance		
Title	**<Spec 0.92** **Philips Disclosure of Necessary Claims>**		
Date Submitted	26 October 2004		
Source	Bob Kraus Philips IP&S 345 Scarborough Road P.O. Box 3001 Briarcliff Manor, NY 10510-8001	Voice: Fax: E-mail:	[914-333-9634] [914-332-0615] [Bob.Kraus @Philips.com]
Re:	[Form for Necessary Claims Declaration.]		
Abstract	[Use this form to disclose and state position regarding licensing of necessary claims. If your company intends to declare intellectual property contributions necessary to implement ZigBee specifications, complete this form according to the instructions.]		
Purpose	[.]		
Notice	This document has been prepared to assist the ZigBee Alliance. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.		
Release	The contributor acknowledges and accepts that this contribution will be posted in the member area of the ZigBee web site **AS PHILIPS CONFIDENTIAL INFORMATION**.		

Legal Notice

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NECESSARY CLAIMS DECLARATION
(APPLIES TO BOTH PROMOTER MEMBERS AND PARTICIPANTS)

Please return or FAX to: Executive Director, ZigBee Alliance
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Disclosure Period:
_____ to 27 OCT. 2004

This Declaration is made in accordance with and subject to the ZigBee Alliance Intellectual Property Rights Policy

A. ZIGBEE ADOPTED SPECIFICATION or ZIGBEE PROPOSED SPECIFICATION:

Number: 0.92

Title: _____

B. MEMBER ORGANIZATION:

Legal Name of Member Organization: Philips Electronics North America Corporation

If the Member is completing this Declaration to disclose Necessary Claims of an Affiliate or Non-Member, the Member must provide the following information:

Legal Name of Affiliate: Koninklijke Philips Electronics N.V.

Member is authorized to act on behalf of Affiliate in filing this Disclosure.

C. CONTACT FOR LICENSE TERMS AND CONDITIONS:

Name of Organization: Philips Electronics North America Corporation

Name of Individual & Department: Robert J. Kraus, Intellectual Property & Standards

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D. POSITION REGARDING LICENSING OF NECESSARY CLAIMS:

If the Member owns, has a right to, or is aware of any Necessary Claims, please specify the patent number, patent application number and/or relevant claims.

(SEE ATTACHMENT A)

With respect to licensing such Necessary Claims, Member declares as follows ***(check one box only)***:

1. The parent of Member is prepared to grant a Royalty Free License to the Alliance, Promoter Members and Participants in respect of claims identified on Attachment A as "Mandatory".

E. The parent of Member is willing to grant a fee-based license, under the claims identified on Attachment A as Optional (and variations of such claims) and under reasonable and non-discriminatory terms and conditions, to the Alliance, Promoter Members and Participants in order to fully comply with the ZigBee Proposed Specification 0.92 or Adopted Specification.

E. SIGNATURE:

Print name of authorized person: Robert J. Kraus

Title of authorized person: Principal Counsel, Intellectual Property

Signature of authorized person: _____ Date: _____

ATTACHMENT A

Spec 0.92 documents referenced are:

- 02130r9 Network Specification
- 03525r5 ZigBee Application Framework Specification
- 03529r6 ZigBee Device Profile

PHGB 010073		
Relevant Claims	**Mandatory/Optional**	**Section of Proposed Spec. 0.92**
3. A method of operating a master-slave distributed network comprising a master node and a plurality of slave nodes, the master node and the slave nodes being operatively interconnected, wherein a slave node wishing to send a data packet to the master node includes in the data a prestored address of the next node in a route to the master node and transmits the data packet.	Mandatory	**02130r9** 10.3.2, 10.3.3
4. A method as claimed in claim 3, characterised in that a slave node receiving a data packet includes in the data packet the stored address of the next node in the route to the master node before transmitting the data packet.	Mandatory	**02130r9** 10.3.3
5. A method as claimed in claim 3 or 4, characterised by the master node including addresses of the slave nodes on a route to a destination slave node in a data packet to be transmitted.	Mandatory	**02130r9** 10.2.1 (limited: 1 or 2 hops only)
6. A method as claimed in claim 5, characterised by a slave node receiving a data packet removing its own address from the data packet and transmitting the altered data packet.	Mandatory	**02130r9** 10.3.3
7. A method as claimed in any one of claims 3 to 6, characterised by a new slave node transmitting an invitation message requesting routing information from in-range slave nodes, the new slave node receiving routing information and determining which of the in-range slave nodes is the preferred node in its route to the master node and storing its address.	Mandatory	**02130r9** 10.3.4
8. A method as claimed in any one of claims 3 to 7, characterised by, after an alteration in the network, slave nodes re-examining their routes to the master node and in response to a slave node finding that its route does not comply with predetermined routing criteria, that slave node setting-up a new route by storing the address of the next node in its route.	Optional	**02130r9** 10.3.5

PH GB030052		
Relevant Claims	**Mandatory/Optional**	**Section of Proposed Spec. 0.92**
1. A method of operation of a networked device in a network having at least one other device, the method including: sending (104) a simple device description query message to at least one other device requesting a simple device description; receiving (106) from the other device a simple device description message of defined length including a device type value representing the type of the other device; sending (108) an extended device description query message to the other device requesting an extended device description from the other device; and receiving (110) from the other device an extended device description of variable length.	Optional	**03525r5** 6.4, 6.5 **03529r6** 5.1.1.5, 5.1.1.8
2. A method according to claim 1 further including establishing (102) the network address of another device or other devices before the step of sending (104) a simple device description to at least one other device.	Optional	**02130r9** 10.1.3 **03529r6** 5.1.1.1, 5.1.1.2
8. A method of operation of a networked device, including: receiving (104) a simple device description query message from one of the other devices requesting a simple device description; sending (106) to the other device a simple device description message of defined length including a device type value representing the type of the networked device; receiving (108) an extended device description query message from the other device requesting an extended device description from the networked device; and sending (110) to the other device an extended device description of variable length.	Optional	**03525r5** 6.4, 6.5 **03529r6** 5.1.1.5, 5.1.1.8, 5.2.1.5, 5.2.1.8

9. A networked device, including: a transceiver (8) for sending and receiving messages: and a message handler (26, 182) arranged to carry out the steps of: on receiving (104) a simple device description query message from one of the other devices, sending (106) to the other device a simple device description message of defined length including a device type value representing the type of the networked device; and on receiving (108) an extended device description query message from another device sending (110) to the other device an extended device description of variable length.	Optional	**03525r5** 6.4, 6.5 **03529r6** 5.1.1.5, 5.1.1.8, 5.2.1.5, 5.2.1.8
11. A networked device, including: a transceiver (8) for sending and receiving messages: a message handler (26, 182) arranged to carry out the steps of: sending a simple device description query message to another device requesting a simple device description; receiving from the other device a simple device description message of fixed length including a device type value representing the type of the other device and a field indicating whether an extended device description is available; and further arranged to optionally carry out the steps of: testing the simple device description message to determine whether an extended device description is available; sending an extended device description query message to the other device requesting an extended device description from the other device; and receiving from the other device an extended device description of variable length.	Optional	**03525r5** 6.4, 6.5 **03529r6** 5.1.1.5, 5.1.1.8, 5.2.1.5, 5.2.1.8

15. A system, comprising a plurality of networked devices each having a transceiver for sending and receiving network messages; at least one networked device arranged to send a simple device query message to other devices and to receive and interpret simple device description messages subsequently received from the other devices; at least one networked device arranged to send an extended device query message to other devices and to receive and interpret extended device description messages subsequently received from the other devices; each of the networked devices being arranged to respond to an incoming simple device query message from another of the devices by sending a simple device description message of defined length including a device type value representing the type of the device; and at least one of the networked devices is arranged to respond to an incoming extended device query message from another of the devices by sending an extended device description message.	Optional	**03525r5** 6.4, 6.5 **03529r6** 5.1.1.5, 5.1.1.8, 5.2.1.5, 5.2.1.8
18. A computer program for controlling a networked device, the computer program being arranged to cause the networked device to carry out the steps of a method according to any of claims 1 or 2.	Optional	**As 1 & 2**
20. A computer program according to claim 18 recorded on a data carrier (14).	Optional	**As 1 & 2**

PHGB 030054		
Relevant Claims	**Mandatory/Optional**	**Section of Proposed Spec. 0.92**
3. A method of operation of a networked device, including: transmitting or receiving (104) a simple device description message (230) of defined length, the simple device description message being in the form of a token-compressed message compressed from a human-readable message format, the message including a device type value representing the type of the other device; the device type value being selected from a device type hierarchy having predetermined top level elements including a controller device type (52) and a basic device type (54), and at least one further level (68) of subsidiary device types depending from the basic device type (54) and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type (52).	Mandatory for transmission but optional (ZigBee critical) for reception	**03525r5** 6.4 **03529r6** 5.2.1.5
4. A method according to claim 3 further including the steps of: establishing (102) the address of at least one other device; sending (104) a simple device description query message to the other device or one or more of the other devices requesting a simple device description; receiving (106) from the other device or devices the simple device description message.	Optional	**02130r9** 10.1.3 **03525r5** 6.4 **03529r6** 5.1.1.1, 5.1.1.2, 5.1.1.5, 5.2.1.5
5. A method according to claim 3 further comprising sending (108) an extended device description query message to the other device or one of the other devices requesting an extended device description from the other devices; and receiving (110) from the other device or the one of the other devices an extended device description of variable length.	Optional	**03525r5** 6.5 **03529r6** 5.1.1.8, 5.2.1.8

14. A networked device, including: a transceiver (8) for sending and receiving messages; and: a message handler (26, 182) arranged to send or receive simple device description message of defined length, the simple device description message being in the form of a token-compressed message compressed from a human-readable message format, the message including a device type value representing the type of the other device; the device type value being selected from a device type hierarchy having predetermined top level elements including a controller device type (52) and a basic device type (54), and at least one further level (68) of subsidiary device types depending from the basic device type (54) and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type (52).	Mandatory	**03525r5** 6.4 **03529r6** 5.2.1.5
15. A networked device according to claim 14, wherein the message handler is arranged to carry out the steps of: establishing (102) the address of at least one other device; sending (104) a simple device description query message to another device requesting a simple device description; receiving (106) from the other device the simple device description message of fixed length including a device type value representing the type of the other device and a field indicating whether an extended device description is available; and further arranged to optionally carry out the steps of: testing the simple device description message to determine whether an extended device description is available; sending (108) an extended device description query message to the other device requesting an extended device description from the other device; and receiving (110) from the other device an extended device description of variable length.	Optional	**02130r9** 10.1.3 **03525r5** 6.4, 6.5 **03529r6** 5.1.1.1, 5.1.1.2, 5.1.1.5, 5.1.1.8, 5.2.1.5, 5.2.1.8

20. A computer program defining a device type hierarchy having predetermined top level elements including a controller device type (52) and a basic device type (54), and at least one further level (68) of subsidiary device types depending from the basic device type (54) and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type (52), the computer program being arranged to cause a networked device (2,4) to send and/or receive simple device description messages (230) including the device type selected from the device type hierarchy.	Mandatory for transmissionbutoptional(ZigBee critical)for reception	**03525r5** 6.4 **03529r6** 5.2.1.5

21. A computer program according to claim 20 for controlling a controller-type networked device, the networked device having a transport stack and an application, the computer program comprising: code implementing a transport adaption layer (180) for interfacing with the transport stack; code implementing an application programming interface (186) for interfacing with the application; and code implementing a messaging layer (182) including the capabilities of sending and receiving messages in a token-encoded human readable messaging format, the code being arranged to cause the networked device: to recognise incoming device query messages requiring a simple device description response and to provide a simple device description response including a device type of controller device type; to respond to an incoming controller query message querying whether the networked device can control a predetermined device type by responding with the lowest level of device type in the list of device types that can be controlled by the networked device that either is the predetermined device type or is a higher level device type from which the predetermined device type depends; and to carry out the steps of: sending a device query message to another device; receiving a response from the other device indicating the device type of the other device, the device type being selected from a device type hierarchy having predetermined top level elements including a controller device type and a basic device type, and at least one further level of subsidiary device types depending from the basic device type and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type; determining the extent to which the networked device can control the other device by determining the lowest level of device type that either is the device type of the other device or is a higher level device type from which the device type of the other device depends, in the list of device types	Optional	**03525r5** 6.4 **03529r6** 5.1.1.5, 5.2.1.5

that can be controlled by the networked device; and controlling the other device with the functionality of the determined lowest level of device type by sending control signals selected from a list of control signals appertaining to the determined lowest level of device type.