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Ref: US/000055

15 December 2003

To FCC

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EHA700C-SMC45-1, and HN22011011B-2 and HN2ABTM3-3

In May 2003 BABT submitted on behalf of Intermec a submission including 3 Transmitters

- A PCE GSM Radio including GPRS functionality
- A DTS radio based on 802.11B
- A DTS Bluetooth radio

At that time the part 15 radios also held modular grants.

Subsequently it was agreed to withdraw the DTS parts of the submission and replace them with Permissive changes to the respective modules.

In the interim the modules had been refilled under HN2011B-2 and HN2ABTM3-3

This letter requests a Class 2 Permissive change to the HN22011011B-2 grant to permit its use within the EHA700C-SMC45-1 host and co-transmit with the PCE transmitter included within that grant.

There is no electrical change to the module associated with this request. The conformity under the modular approval is not effected.

The following correspondence is enclosed in support of this request as follows:

- BABT upload summary
- Email dated 16<sup>th</sup> July from H.Carr to Tim Harrington explaining the plan to restructure the submission
- Request letter dated 5<sup>th</sup> August to restructure the submission
- E-mail dated 1<sup>st</sup> July from Intermec to BABT agreeing to the overall strategy and providing a link between the tested and submitted modules
- Email from Tim Harrington to H.Carr detailing the grant conditions to be applied
- Report hierarchy letter from original complex submission

Yours sincerely

Hilton Carr  
Task Manager, Certification and Technical Development



Annex to

## **TCB Recommendation for APPROVAL**

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### **Description of Equipment**

IEEE 802.11b Module .

**FCC Id: HN22011B-3**

**Equipment Class: DTS Digital Transmission System**

**Permissive Change December 2003**

### **Relevant Technical Documentation**

Exhibit 6: Technical Report

BABT Test Report RO610071

Combined Spurious Emissions Letter dated 20<sup>th</sup> November 2002

Exhibit 7: Test Set-up Photographs

BABT Test Report RO610071 Page 9

Exhibit 11: RF Exposure

Intermec 700C-SMC45 SAR report WS610071 02

Celltech 700C SAR Test Report 100202284HN2

Exhibit 13: Cover Letters

Request document

FCC TCB Supporting letter

FCC Report Hierarchy Letter

FCC TCB Letter

Agents Letter

Intermec Merger Letter

Model 700C Host Letter

Signed: .....  .....

on behalf of BABT

Date: ..... 15<sup>th</sup> December 2003 .....

## Hilton Carr

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**From:** Hilton Carr  
**Sent:** 16 July 2003 10:49  
**To:** Diane Poole (E-mail)  
**Cc:** Tim Harrington (E-mail)  
**Subject:** Restructuring Intermec approvals

To: Diane Poole,

Cc: Tim Harrington

### Restructuring of Intermec Approvals

#### Background:

BABT (as TCB) have progressed a grant for the 700C including 3 radio modules (GSM, 802.11, and Bluetooth) as mobile apparatus under FCC id EHA700C-SMC45.

BABT have submitted a request for a grant to the FCC for the 700C including 3 radio modules (GSM, 802.11, and Bluetooth) as portable apparatus under FCC id EHA700C-SMC45-01. This is structured in two parts;

- PCE submission for the GSM radio
- DTS submission for the 802.11 and Bluetooth Radios

Northwest EMC Inc ( as TCB) have progressed a host dependant (700C) radio module approval for the 802.11 radio under the FCC id HN22011B for mobile use

Northwest EMC Inc ( as TCB) have progressed a host dependant (700C) radio module approval for the Bluetooth radio under the FCC id HN2ABTM3-2 for mobile use

Both the 802.11 and Bluetooth approval grants refer to the "Grantees 700C" as the host. Which must refer to products linked to the HN2 grantee code.

Northwest EMC Inc ( as TCB) are progressing a host dependant (700C) radio module approval for the CDMA radio using the Grantee code HN2 . This will become a Portable Approval when used with the 700C co-located with the 802.11 and Bluetooth modules.

[ It is not known whether this is planned in 2 stages with Northwest TCBing it for mobile use then submitting a permissive change to the FCC to make it portable; or whether the whole submission was made direct to the FCC for portable use]

Intermec have declared they wish to be able to ship different configurations of the 700C using different combinations of radio modules ( excluding any combinations of GSM and CDMA modules). Intermec hold both the HN2 and EHA grantee codes.

For the Northwest approval structure this would result in multiple labels *{exact words not given}* "This host includes radio modules under the following FCC ids: ....." for each combination.

For the BABT approval structure this would result in multiple filings for different FCC ids for each configuration.

Intermec have confirmed that configuration only takes place at the factory or at authorised service centres; field upgrades are not permitted.

#### Target

Approvals for the 4 Radio modules as portable apparatus such that any of the required combinations may be provided.

**Plan**

- 1: Northwest EMC progress a permissive change to the 802.11 radio module FCC id HN22011B for portable use co-located with the CDMA radio module.
- 2: Northwest EMC progress a permissive change to the Bluetooth radio module FCC id HN2ABTM3-2 for portable use co-located with the CDMA radio module.
- 3: BABT submit the MC45 GSM/GPRS Radio Module to the FCC as a Portable Radio for use co-located with the 802.11 and Bluetooth radios, under the grantee code HN2.
- 4: BABT pursue a permissive change for the 802.11 radio module ( FCC id HN22011B ) to allow co-location with the GSM module as an alternative to the CDMA module.
- 5: BABT pursue a permissive change for the Bluetooth radio module ( FCC id HN2ABTM3-2 ) to allow co-location with the GSM module as an alternative to the CDMA module .

**Questions for FCC**

- 1: Do you see any flaws in the overall plan? Have you any significant caveats to be considered?
- 2: Can we restructure the EHA700C-SMC45-01 combined application into any (or all ) of the following:
  - a. An application for a PCE radio module using the HN2 Grantee code ( equipment id to be defined) in Grantees Host 700C [ permitting co-location with FCC id HN2ABTM3-2, and FCC id HN22011B ]  
  
This is supported by the data already submitted and evaluated for the PCE portion of the current EHA700C-SMC45-01 submission ( plus already identified shortfalls )
  - b. Replace the DTS portion by permissive changes to the FCC id HN2ABTM3-2, and FCC id HN22011B to permit co-location with the PCE (GSM) radio.
- 3: If all of request 2 is not possible under the existing fees paid what additional fees and filings would be required?
- 4: Please identify what communications/letters etc will be required to enable the required course of action to progress.

Notes:

- a. BABT are obtaining the additional SAR data as requested for the existing EHA700C-SMC45-01 application .
- b. Please identify whether any other part of the correspondence is outstanding in the light of the request to re-arrange the approval.

Best Regards

**Hilton Carr**

Task Manager, Certification and Technical Development

BABT, an accredited UK Certification/Notified Body and company of TÜV Product Service Ltd.,  
34 Molesey Road - Walton-on-Thames - Surrey - KT12 4RQ - UK  
Direct Tel: +44 (0) 1932 251227 Fax: +44 (0) 1932 251201 Email: hilton.carr@babt.com

**Tracking:**

Recipient	Delivery	Read
Diane Poole (E-mail)		
Tim Harrington (E-mail)		
Alan Binks	Delivered: 16/07/03 10:49	Read: 16/07/03 12:26
Phil Dolling	Delivered: 16/07/03 10:49	Read: 16/07/03 10:50



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Ref: US/000034

Tuesday, 05 August 2003

Diane Poole  
FCC

Direct Dial: +44 (0)1932 251227  
E-mail: [Hilton.carr@babt.com](mailto:Hilton.carr@babt.com)  
Website: [www.babt.com](http://www.babt.com)

Dear Diane

**Submission for FCC id EHA700C-SMC45-1**

This is to request a change to the application made under this FCC id.  
We wish to do the following:

**DTS submissions under EA549922.**

We wish to withdraw the DTS submissions for the 802.11 and Bluetooth radios entered under EA549922.

**PCE submission under EA193005**

We wish to change the PCE submission (EA193005) from a complete product submission to a host dependant radio module.

We wish the grant condition to permit co-location with both and co-transmission with either of the following radios in the same host

1. 802.11 radio under grantee code HN22011B
2. Bluetooth Radio under grantee code HN2ABTM3-2

Furthermore we note that Intermec holds both grantee codes HN2 and EHA. As such please draft the Host definition such that the "Grantees Host 700C" encompasses both Grantee codes.

As a separate exercise BABT will pursue the following permissive changes:

1. FCC id : HN22011B to permit co-location with EHA700C-SMC45-1  
This will use data/test results currently filed under the DTS submissions under EA549922
2. FCC id : HN2ABTM3-2 to permit co-location with EHA700C-SMC45-1  
This will use data/test results currently filed under the DTS submissions under EA549922

Note: We will need your solution for the "Grantees Host 700C" to make clear they refer to the same 700C Host.





I hope this is clear.

If you have any problems with this request please let me know

Yours sincerely

Hilton Carr  
Task Manager, Certification and Technical Development

cc: Tim Harrington (FCC)  
Scott Holub (InterMec)  
Phil Dolling (TUV)  
Michelle Hardy (TUV)

## Hilton Carr

---

**From:** Stu.Adams@intermec.com  
**Sent:** 01 July 2003 19:21  
**To:** Hilton.Carr@babt.com  
**Cc:** Phil.Dolling@babt.com; Scott.Holub@intermec.com  
**Subject:** RE: Restructuring of Intermec MC45 product US approvals

Hello, Hilton:

Sorry to take so long getting back to you on this.

We are in agreement with your overall strategy. Information you may find useful...

The new FCC ID for the 802.11b radio option that allows co-location with the Bluetooth and CDMA radios, in a portable device, will be HN22011B-2. NW EMC has this approval in process. A copy of the grant will be provided as soon as it's available.

The new FCC ID for the Bluetooth radio option that allows co-location with the 802.11b and CDMA radios, in a portable device, will be HN2ABTM3-3. NW EMC has this approval in process. A copy of the grant will be provided as soon as it's available.

The new FCC ID for the GPRS radio should be HN2SMC45-2 with allowed co-location, in a portable device, with either or both transmitters covered under HN2ABTM3-3 or HN2SB555-2. If it should turn out that a PCE Radio Module approval is not possible, Intermec is fine with FCC ID HN2SMC45-2 being used for approval of the 700C host device with GPRS module and portable co-location with the other two radios.

Let me know if you need additional information for planning.

Best Regards,

Stu Adams  
Manager, Product Reliability and Compliance  
Intermec Technologies Corporation  
550 Second Street SE  
Cedar Rapids, IA 52401  
USA

Phone: + 1 319 369 3541  
Fax: + 1 319 369 3299

-----Original Message-----

From: Hilton Carr [mailto:Hilton.Carr@babt.com]  
Sent: Thursday, June 19, 2003 4:21 AM  
To: 'Stu.adams@intermec.com'; 'Scott.Holub@intermec.com'  
Cc: Phil Dolling  
Subject: Restructuring of Intermec MC45 product US approvals

Dear Stu and Scott,

This e-mail is to confirm my understanding of the way forward we agreed during our phone call yesterday. Please reply with the requested information and confirm this is the way forward you wish to take.

Background:

BABT (as TCB) have progressed a grant for the 700C including 3 radio modules (GSM, 802.11, and Bluetooth) as mobile apparatus under FCC id EHA700C-SMC45.

BABT have submitted a request for a grant to the FCC for the 700C including 3 radio modules (GSM, 802.11, and Bluetooth) as portable apparatus under FCC id EHA700C-SMC45-1.

Northwest EMC Inc ( as TCB) have progressed a host dependant (700C) radio module approval for the 802.11 radio under the FCC id HN22011B for mobile use

Northwest EMC Inc ( as TCB) have progressed a host dependant (700C) radio module approval for the Bluetooth radio under the FCC id HN2ABTM3-2 for mobile use

Both the 802.11 and Bluetooth approval grants refer to the "Grantees 700C" as the host.

Northwest EMC Inc ( as TCB) are progressing a host dependant (700C) radio module approval for the CDMA radio using the Grantee code HN2 . This will become a Portable Approval when used with the 700C co-located with the 802.11 and Bluetooth modules. [ It was not clarified whether this is planned in 2 stages with Northwest TCBing it for mobile use then submitting a permissive change to the FCC to make it portable; or whether the whole submission was made direct to the FCC for portable use]

Intermec have declared they wish to be able to ship different configurations of the 700C using different combinations of radio modules ( excluding any combinations of GSM and CDMA modules).

Intermec hold both the HN2 and EHA grantee codes.

For the Northwest approval structure this would result in multiple labels {exact words not given} "This host includes radio modules under the following FCC ids: ....." for each combination.

For the BAPT approval structure this would result in multiple filings for different FCC ids for each configuration.

Intermec have confirmed that configuration only takes place at the factory or at authorised service centres; field upgrades are not permitted.

#### Target

Approvals for the 4 Radio modules as portable apparatus such that any of the required combinations may be provided.

#### Plan

- \* 1: Northwest EMC progress a permissive change to the 802.11 radio module FCC id HN22011B for portable use co-located with the CDMA radio module.
- \* 2: Northwest EMC progress a permissive change to the Bluetooth radio module FCC id HN2ABTM3-2 for portable use co-located with the CDMA radio module.
- \* 3: BAPT submit the MC45 GSM/GPRS Radio Module to the FCC as a Portable Radio for use co-located with the 802.11 and Bluetooth radios, under the grantee code HN2.
- \* 4: BAPT pursue a permissive change for the 802.11 radio module ( FCC id HN22011B ) to allow co-location with the GSM module as an alternative to the CDMA module.
- \* 5: BAPT pursue a permissive change for the Bluetooth radio module ( FCC id HN2ABTM3-2 ) to allow co-location with the GSM module as an alternative to the CDMA module .

#### Proposed immediate actions

- \* A: Intermec to agree the plan with BAPT
- \* B: Intermec to supply BAPT with the FCC id to be used with the GSM module : ( e.g. HN2MC45)
- \* C: BAPT to pass plan to FCC for "blessing"
- \* D: BAPT to request FCC to change the current EHA700C-SMC45-1 submission from a complete product submission to a PCE Radio Module submission under the FCC id given in action B.
- \* E: BAPT to request FCC to "do" the resultant permissive changes to the 2 radio modules under the fees/evaluation already taken place for the DTS part of the EHA700C-SMC45-1 submission and in parallel with the GSM PCE radio grant; [ If not BAPT will do as a TCB]
- \* E: BAPT to agree with Intermec the revised Application Forms and any consequential fees
- \* F: Intermec to advise BAPT with copies of the grants once the Northwest EMC permissive changes to the 802.11 and Bluetooth modules are received.



Best Regards  
Hilton Carr  
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A list of the Companies covered by this statement is available from our registered office at: Segensworth Road, Fareham, Hants PO15 5RH.

## Hilton Carr

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**From:** Tim Harrington [THARRING@fcc.gov]  
**Sent:** 13 August 2003 17:47  
**To:** Hilton.Carr@babt.com  
**Cc:** Diane Poole; Martin Perrine; Tim Harrington  
**Subject:** EHA700C-SMC45-1 intermec

Grant note for EHA700C-SMC45-1 will include:  
Colocated transmitter operating configurations with optional FCC ID:  
HN2ABTM3-3 and FCC ID: HN22011B-2 have been evaluated as described in this filing.

Likewise, grant notes for LAN and BT can be modified to state:  
LAN: Colocated transmitter operating configurations with optional FCC ID:  
HN2ABTM3-3 and FCC ID: EHA700C-SMC45-1 or HN2SB555-2 have been evaluated as described in this and previous filings. Device operates only with specific internal antenna when colocated with HN2SB555-2 or EHA700C-SMC45-1, and with specific second external antenna when not colocated with HN2SB555-2 or EHA700C-SMC45-1.  
BT: Colocated transmitter operating configurations with optional FCC ID:  
HN22011B-2 and FCC ID: EHA700C-SMC45-1 or HN2SB555-2 have been evaluated as described in this and previous filings.

Due to colocation and HN22011B-2 and HN2ABTM3-3 processing, filings should go to FCC.

From: Hilton Carr  
To: Tim Harrington  
Date: 8/5/03 5:47AM  
Subject: FW: Submission for FCC id EHA700C-SMC45-1

Tim,

The mail below was sent by BABT as "Agent" for a direct FCC grant.

With this one I'm the TCB. Please can you confirm that BABT (as TCB) can progress the permissive changes listed in the letter. Note the Radios involved are both pt 15 which of themselves are not subject to SAR. The SAR issues will have been addressed in the PCE application.

Best Regards  
Hilton Carr

> -----Original Message-----  
> From: Hilton Carr  
> Sent: Tuesday, August 05, 2003 10:45 AM  
> To: Diane Poole (E-mail)  
> Cc: Tim Harrington (E-mail); Phil Dolling; Michelle Hardy;  
> 'scott.holub@intermec.com'  
> Subject: Submission for FCC id EHA700C-SMC45-1  
>  
> Diane,  
>  
> Please note and expedite the enclosed letter.  
>  
> If you need me to do anything with the 731 please let me know; I'm not  
> trying to dump it on you but likewise don't want to screw it up.  
>  
> <<Change in Application Letter.pdf>>  
> Best Regards  
> Hilton Carr

# FCC Report Hierarchy For FCC ID EHA700C-SMC45-1

