

Infrared Data Association Specifications for Ir Mobile Communications (IrMC)

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Errata Type Classifications

Following are a list of errata to the IrMC Specification Version 1.1 dated March 01, 1999.
The points are classified according to the following scheme:

CLARIFICATION: Textual enhancement that provides a clearer explanation of a specification item without changing any behavior.

ENHANCEMENT: An addition of architectural or parametrical elements with very little impact on the device's bandwidth occupancy.

MODIFICATION: A modification of the currently specified behavior which is backwards compatible (i.e. which does not require any modification of already existing IrMC products)

CHANGE: A modification of the currently specified behavior that obsoletes some items in IrMC Version 1.1

PROBLEM: A known problem for which an erratum has yet to be proposed.

All references to "application" within this document refer to any device or software application that implements IrMC.

IrMC V1.1 Errata Approved at IrDA Meeting 14th July 1999

1. *vMsg Version*

Problem:

In Figures 9-1, 9-2 and 9-3, VMSG are specified with "VERSION:1.0"

Solution:

Change the vMsg version to 1.1 on Figures 9-1, 9-2 and 9-3.

2. *vMsg Formal Definition (I)*

Problem:

In section 9.9.2 the BNF definition suggests that there can be more than one <vmessage-property> by including the "*" character at the end.

```
<vmessage-object> ::= {
"BEGIN:VMSG" <CRLF>
<vmessage-property>*
[<vmessage-originator>]*
<vmessage-envelope>
"END:VMSG" <CRLF>
}
```

Solution:

```
<vmessage-object> ::= {
"BEGIN:VMSG" <CRLF>
<vmessage-property>
[<vmessage-originator>]*
<vmessage-envelope>
"END:VMSG" <CRLF>
}
```

3. *vMsg Formal Definition (II)*

Problem:

In section 9.9.2 the BNF definition ambiguously describes the <vmessage-property>.

In V1.1 the definition is

```
<vmessage-property>::=<vmessage-version-property> * X-IRMC-STATUS * X-IRMC-TYPE
```

Solution:

```
<vmessage-property>::= {
    <vmessage-version-property> <CRLF>
    [<vmessage-irmc-status-property>]
    [<vmessage-irmc-type-property>]
    <vmessage-irmc-status-property>::="X-IRMC-STATUS:" "UNREAD"|"READ" <CRLF>
    <vmessage-irmc-type-property>::="X-IRMC-TYPE:" "INET"|"MSG" <CRLF>
}
```

4. *IRMC-SYNC Target value is case sensitive*

Problem:

You might want to mention that the IRMC-SYNC Target value is case sensitive. Section 4.6 gives the best description of using the IRMC-SYNC Target so that might be the best place. You should also mention directed connections and reference the OBEX specification.

Solution:

Add to Section 4.6, bullet item 2 after the 4th sentence:

For more information on directed connection procedures in OBEX, refer to [OBEX].

Add to the end of Section 4.6, bullet item 2:

The “IRMC-SYNC” Target header value is case sensitive and not null-terminated.

5. IrMC sync client should authenticate the server

Problem:

Currently the IrMC specification says that the sync server should authenticate the client when the OBEX connection is established. The specification needs to be changed to say that the client should also authenticate the server. Without this change there is a potential security risk, where a device could extract the contents of the sync engines database.

Assuming that the phone is the device which is acting improperly, and the PC contains the main database.

The phone could create an empty phonebook database, and then send the sync command to the PC. The PC would respond by performing synchronisation with the phone. In this case, the result would be to copy the entire PC database into the phone. No authentication is required, as it is only the server which does it.

Solution:

Add text to Sect 4.6 that states that “If data is going to be transferred at IrMC levels 2,3 or 4, It is recommended that the IrMC client also performs an authenticate challenge on the server, at the start of the OBEX connection.”

6. *Propagation of IAS capabilities to the application level*

Problem:

There is a need for applications that support IrMC to optionally be able to gain access to the IAS capabilities for IrMC support. The reason for this is that not all implementers of IrMC may be utilised within the framework of IR. For example Bluetooth.

Solution:

The IAS capability bits that are normally accessed by the IAS GetValueByClass query, would be placed in the devinfo.txt file.

The values must be displayed in HEX, and organised in PI/PL/PV triples as shown in the following example. The HEX values map to the IAS values defined in section 13 of IrMC spec V1.1.

The mechanism specified in vCard V3.0 should be used to limit the line length to less than 76 characters.

IAS-PARAMETERS:0x00,0x01,0x02,0x01,0x01,0x00,0x02,0x02,0x01,0x01

IAS-PARAMETERS2:0x10,0x05,0x30,0x31,0x32,0x33,0x34,0x35

7. Enhancement – “Free-Records” in info.log

Problem:

The number of free records cannot be determined for a database which have variable record sizes. For this kind of databases, the “Maximum-Records” is always a ‘*’. This creates problems for sync engines that try to leave space in the object store for user input; the number of free records cannot be determined. Even a guessed value of the current number of free records would be beneficial to the sync engine.

Solution:

Add a “Free-Records:” field to info.log. The “Free-Records:” field would report the maximum number of records that can be added without filling the memory. Thus the value represents the free space divided by the maximum record size. If the value cannot be calculated ‘*’ should be returned.

Add new section

2.9.4 Free-Records

Number of records that can be added without filling the memory. If the value cannot be calculated a ‘*’ will be used in place of a number.

“2.9.16 Formal Definition of info.log”

```
<information-log> ::= {
```

```
...
```

```
[<free-records>]
```

```
...
```

```
}
```

```
<free-records> ::= "Free-Records:" <digits-or-not-supported>
```

8. *Push Command – Sync Engine Busy*

Problem:

Referring to chapter 5.8 in IrMC 1.1.

Push commands allow the IrMC Server (usually a phone) to send a command to the IrMC Client (usually a sync engine on a PC) to tell it to start synchronization.

If the IrMC Client (sync engine) is currently busy, there is no way for the sync engine to tell the phone that it cannot serve the command.

Solution:

Add the following text to section 5.8

“If the IrMC Client (the sync engine) is busy when it receives a command to start synchronization, it should respond with OBEX response code 0xC3 (Forbidden - operation is understood but refused). The IrMC Server, should resend the command at a later time.”

9. Call Control Command +CPBR needs extra square brackets

Problem:

The command was incorrectly copied from the GSM 07.07 standard. The overall square brackets were omitted from the definition in the table. Without these brackets, all phonebook entries, selected by the location number range <index1>...<index2>, must to be returned even though there is no entries.

Solution:

Add the brackets to the definition as shown in the following table

Command	Possible response(s)
+CPBR=<index1>[,<index2>]	[+CPBR: <index1>,<number>,[<type>],<text>[[...] <CR><LF>+CPBR: <index2>,<number>,[<type>],<text>]]
+CPBR=?	+CPBR: (list of supported <index>s),<nlength>,<tlength>

10. Call Control Command +CPBR Multiple Number Support

Problem:

The +CPBR response can only return a single phone number for each index. If the device contains multiple numbers for each entry, which number should be returned.

Solution:

Add the following text to the +CPBR definition.

“It is implementation specific which telephone number is returned. However, the implementation must always returns the same number for a given index. If the device supports the vCard standard, the number with the PREF (preference) field should be returned.”

11. Inconsistencies in the definition for the X-IRMC-LUID property

Problem:

Inconsistencies between section 4.2 and 5.7.3 / 5.7.5

In section 4.2 Read Access spec (Unique Index Note) it states that "The X-IRMC-LUID property ... should not be included in Level 4 GET Responses since the LUID can be derived from the Object name."

In sections 5.7.3 and 5.7.5 it shows the LUIDs.

5.7.3 Sync with Changes That Fit the Change Log (Fast Sync)

Cell OBEX response : "Jörgen", X-IRMC-LUID=899

5.7.5 Sync with Full Change Log (Semi Slow Sync)

Cell OBEX response : "Tarzan", X-IRMC-LUID= 999

Solution:

Delete in section 4.2 "It should not be included in Level 4 GET Responses since the LUID can be derived from the Object name."

12. vNote definition inconsistent for level 2 access

Problem:

The filename to access vNotes at level 2 are inconsistent. In section 5.8.1 it is defined as "telecom/note.vnt" and in other sections it is defined as "telecom/nt.vnt".

Solution:

Change the definition in section 5.8.1 to "telecom/nt.vnt".