SyncML Implementation Conformance Statement
DataSync v1.1.1

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Open Mobile Alliance
OMA_IOP_DMSYNC_SICS_DS111-2003-01-09-v1.0

Continues the Technical Activities
Originated in the SyncML Initiative

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Document History	
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1 INTRODUCTION

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a given SyncML specification. Such a statement is called an Implementation Conformance Statement (ICS).

The purpose of this statement is to define a methodology for showing conformance with the SyncML specifications. Vendors filling in this form will mark the items with either YES or NO, indicating whether the items are implemented or not. Mandatory items marked NO MUST have explanatory text.

NOTE: Server must be able to deal with the two cases of packages 1 & 3 being sent seperately and combined.

Please use section 6 to provide any additional information with regards to your Implementation Conformance Statement. Please do not annotate the SCR items in the following sections.

2 PRODUCT INFORMATION

2.1 Device and Contact Information

Device Name & Version:	SyncMLClient 2.0
Company:	Symbian
Contact Name:	Frank Baumann
Contact Phone:	+44 20 7563 2584
Contact Email:	frank.baumann@symbian.com
Product is:	CLIENT[X] SERVER[ ]
Transports supported:	HTTP[X] WSP[X] OBEX[ ]
OBEX support:	IrDA[ ] Bluetooth[ ]

Notes:

- The contents of the [Device Name & Version] field will appear in the List of compliant products on the SyncML web page.
- OBEX support for RS232 and USB is not defined scoped out within the SyncML bindings specifications. Devices cannot claim these transports until the specifications have been updated.

2.2 Formats Supported

This section contains the ICS proforma for the Statics Conformance Requirements for the Content Format as specified in [3].
NOTE: If a server supports a data type listed below, it must also support the associated content format.

Data Type	Content Format	Supported (Y/N)
Contact	vCard 2.1	Y
	vCard 3.0 (optional)	N
Calendar	vCalendar 1.0	Y
	iCalendar 2.0 (optional)	N
Memos	text/plain	N
Tasks	vTodo 1.0	N
Email	message/rfc822	N
	message/rfc2822	N
	message/rfc2045	N
Other (Please specify any other supported data types)		N

3 SYNC SERVER CONFORMANCE

NOTE: Server SHOULD be able to log the XML and WBXML documents sent between the server and a client.

3.1 Representation Common Use Elements

This section contains the ICS proforma for the Static Conformance Requirements for the Representation Common Use Elements as defined in [3].

Command	Required of Server		Implemented in Server	
	Sending	Receiving	Sending	Receiving
Archive	MAY	MUST		
Chal	MUST	MUST		
Cmd	MUST	MUST		
CmdID	MUST	MUST		
CmdRef	MUST	MUST		
Cred	MUST	MUST		
Final	MUST	MUST		
Lang	MAY	MAY		
LocName	MAY	MAY		
LocURI	MUST	MUST		
MoreData	MUST	MUST		
MsgID	MUST	MUST		
MsgRef	MUST	MUST		
NoResp	MAY	MUST		
NoResults	MAY	MAY		
NumberOfChanges	MAY	MUST		
RespURI	MAY	MUST		
SessionID*	MUST	MUST		
SftDel	MAY	MAY		
Source	MUST	MUST		
SourceRef	MUST	MUST		
Target	MUST	MUST		
TargetRef	MUST	MUST		
VerDTD	MUST	MUST		
VerProto	MUST	MUST		

*The maximum length of a SessionID is 4 bytes. Note that a client having an 8 bit incrementing SessionID counter is enough for practical implementations.

3.2 Representation Message container elements

This section contains the ICS Proforma for the Static Conformance Requirements for the Message Container elements as defined in [3].

Command	Required of Server		Implemented in Server	
	Sending	Receiving	Sending	Receiving
SyncML	MUST	MUST		

SyncHdr	MUST	MUST		
SyncBody	MUST	MUST		

3.3 Data description elements

This section contains the ICS Proforma for the Static Conformance Requirements for the Data Description elements as defined in [3].

Command	Required of Server		Implemented in Server	
	Sending	Receiving	Sending	Receiving
Data	MUST	MUST		
Item	MUST	MUST		
Meta	MUST	MUST		

3.4 Representation Protocol command elements

This section contains the ICS Proforma for the Static Conformance Requirements for the Protocol Command elements as defined in [3].

Command	Required of Server		Implemented in Server	
	Sending	Receiving	Sending	Receiving
Add	MUST	MUST		
Alert	MUST	MUST		
Atomic	MAY	MAY		
Copy	MAY	MUST		
Delete	MUST	MUST		
Exec	MAY	SHOULD		
Get*	MUST	MUST		
Map	MAY	MUST		
MapItem	MAY	MUST		
Put*	MUST	MUST		
Replace	MUST	MUST		
Result*	MUST	MUST		
Search	MAY	MAY		
Sequence	MAY	MUST		
Status	MUST	MUST		
Sync	MUST	MUST		

*Minimum requirement for a SyncML device is to support Put, Get, and Result when exchanging device information.

3.5 Device Info

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML Device Information as defined in [5].

Element Type	Required of Server		Implemented in Server	
	Sending	Receiving	Sending	Receiving
CTCap	SHOULD	MUST		
CTType	MUST	MUST		
DataStore	MUST	MUST		
DataType	MAY	MUST		
DevID	MUST	MUST		
DevInf	MUST	MUST		
DevTyp	MUST	MUST		
DisplayName	MAY	MAY		
DSMem	MAY	SHOULD		
Ext	MAY	MAY		
FwV	MAY	SHOULD		
HwV	MAY	SHOULD		
Man	MAY	SHOULD		
MaxGUIDSize	MUST NOT	MUST		
MaxID	MAY	SHOULD		
MaxMem	MAY	SHOULD		
Mod	MAY	MAY		
OEM	MAY	MAY		
ParamName	SHOULD	MUST		
PropName	SHOULD	MUST		
Rx	MAY	MUST		
Rx-Pref	MUST	MUST		
SharedMem	SHOULD	MAY		
Size	MAY	MUST		
SourceRef	MUST	MUST		
SupportLargeObjs	MUST	MUST		
SupportNumberOfChanges	MAY	MUST		
SwV	MAY	SHOULD		
SyncCap	MUST	MUST		
SyncType	MUST	MUST		
Tx	MAY	MUST		
Tx-Pref	MUST	MUST		
UTC	MAY	MUST		
ValEnum	SHOULD	MUST		
VerCT	MUST	MUST		
VerDTD	MUST	MUST		
Xnam	MAY	MAY		
Xval	MAY	MAY		

3.6 Meta Info

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML Meta Information as defined in [4].

Element Type	Required of Server		Implemented in Server	
	Sending	Receiving	Sending	Receiving
Anchor	MUST	MUST		
EMI	MAY	MAY		
Format	MUST	MUST		
FreeID	MAY	MUST		
FreeMem	MAY	MUST		
Last	MUST	MUST		
Mark	MAY	MAY		
MaxMsgSize	MAY	MUST		
MaxObjSize	MUST	MUST		
Mem	MAY	MUST		
MetInf	MUST	MUST		
Next	MUST	MUST		
NextNonce	MUST	MUST		
SharedMem	MAY	MUST		
Size	MAY	MAY		
Type	MUST	MUST		
Version	MUST	MUST		

3.7 Protocol

This section contains the ICS Proforma for the Static Conformance Requirements for the Sync Protocol as defined in [2].

Element Type	Server Requirements	
	Required	Implemented
Support of 'two-way sync'	MUST	
Support of 'slow two-way sync'	MUST	
Support of 'one-way sync from client only'	MAY	
Support of 'refresh sync from client only'	MAY	
Support of 'one-way sync from server only'	MAY	
Support of 'refresh sync from server only'	MAY	
Support of 'sync alert'	MAY	
Support of 'busy signalling'	SHOULD	
Support of multiple messages per package	MUST	
Support of combined package 1 and 3	MUST	
Support of 'large object handling'	MUST	
Support of 'number of changes'	MAY	

3.8 Authentication

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML Authentication as defined in [2].

Authentication Type	Server Requirements	
	Required	Implemented
Basic (name and password)	MUST	
MD5	MUST	

3.9 MIME header types

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML MIME Media Types as defined in [3].

MIME Header Type	Server Requirements	
	Required	Implemented
"application/vnd.syncml+xml"	MUST	
"application/vnd.syncml+wbxml"	MUST	

4 SYNC CLIENT CONFORMANCE

4.1 Representation Common Use Elements

This section contains the ICS proforma for the Static Conformance Requirements for the Representation Common Use Elements as defined in [3].

Command	Required of Client		Implemented in Client	
	Sending	Receiving	Sending	Receiving
Archive	MAY	MAY	N	N
Chal	MAY	MUST	Y	Y
Cmd	MUST	MUST	Y	Y
CmdID	MUST	MUST	Y	Y
CmdRef	MUST	MUST	Y	Y
Cred	MUST	MUST	Y	Y
Final	MUST	MUST	Y	Y
Lang	MAY	MAY	N	N
LocName	MAY	MAY	N	N
LocURI	MUST	MUST	Y	Y
MoreData	MAY	MAY	Y	Y
MsgID	MUST	MUST	Y	Y
MsgRef	MUST	MUST	Y	Y
NoResp	MAY	MUST	N	Y
NoResults	MAY	MAY	N	N
NumberOfChanges	MAY	MAY	Y	Y
RespURI	MAY	MUST	N	Y
SessionID*	MUST	MUST	Y	Y
SftDel	MAY	MAY	N	N
Source	MUST	MUST	Y	Y
SourceRef	MUST	MUST	Y	Y
Target	MUST	MUST	Y	Y
TargetRef	MUST	MUST	Y	Y
VerDTD	MUST	MUST	Y	Y
VerProto	MUST	MUST	Y	Y

*The maximum length of a SessionID is 4 bytes. Note that a client having an 8 bit incrementing SessionID counter is enough for practical implementations.

4.2 Representation Message container elements

This section contains the ICS Proforma for the Static Conformance Requirements for the Message Container elements as defined in [3].

Command	Required of Client		Implemented in Client	
	Sending	Receiving	Sending	Receiving
SyncML	MUST	MUST	Y	Y
SyncHdr	MUST	MUST	Y	Y
SyncBody	MUST	MUST	Y	Y

4.3 Data description elements

This section contains the ICS Proforma for the Static Conformance Requirements for the Data Description elements as defined in [3].

Command	Required of Client		Implemented in Client	
	Sending	Receiving	Sending	Receiving
Data	MUST	MUST	Y	Y
Item	MUST	MUST	Y	Y
Meta	MUST	MUST	Y	Y

4.4 Representation Protocol command elements

This section contains the ICS Proforma for the Static Conformance Requirements for the Protocol Command elements as defined in [3].

Command	Required of Client		Implemented in Client	
	Sending	Receiving	Sending	Receiving
Add	SHOULD	MUST	Y	Y
Alert	MUST	MUST	Y	Y
Atomic	MAY	MAY	N	N
Copy	MAY	MAY	N	N
Delete	MUST	MUST	Y	Y
Exec	MAY	MAY	N	N
Get*	SHOULD	MUST	Y	Y
Map	MUST	MAY	Y	N
MapItem	MUST	MAY	Y	N
Put*	MUST	MUST	Y	Y
Replace	MUST	MUST	Y	Y
Result*	MUST	SHOULD	Y	Y
Search	MAY	MAY	N	N
Sequence	MAY	MAY	N	Y
Status	MUST	MUST	Y	Y
Sync	MUST	MUST	Y	Y

*Minimum requirement for a SyncML device is to support Put, Get, and Result when exchanging device information.

4.5 Device Info

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML Device Information as defined in [5].

Element Type	Required of Client		Implemented in Client	
	Sending	Receiving	Sending	Receiving
CTCap	MUST	SHOULD	Y	N
CTType	MUST	MUST	Y	Y
DataStore	MUST	MUST	Y	Y
DataType	MAY	MAY	Y	N

DevId	MUST	MUST	Y	Y
DevInf	MUST	MUST	Y	Y
DevTyp	MUST	MUST	Y	Y
DisplayName	MAY	MAY	Y	N
DSMem	SHOULD	MAY	Y	N
Ext	MAY	MAY	N	N
FwV	SHOULD	MAY	Y	N
HwV	SHOULD	MAY	Y	N
Man	SHOULD	MAY	Y	N
MaxGUIDSize	MUST	MUST NOT	Y	N
MaxID	SHOULD	MAY	N	N
MaxMem	SHOULD	MAY	N	N
Mod	MAY	MAY	Y	N
OEM	MAY	MAY	Y	N
ParamName	SHOULD	SHOULD	Y	N
PropName	MUST	SHOULD	Y	N
Rx	MAY	MUST	Y	Y
Rx-Pref	MUST	MUST	Y	Y
SharedMem	SHOULD	MAY	N	N
Size	MAY	MAY	Y	N
SourceRef	MUST	MUST	Y	Y
SupportLargeObjs	SHOULD	SHOULD	Y	Y
SupportNumberOfChanges	MAY	MAY	Y	Y
SwV	SHOULD	MAY	Y	N
SyncCap	MUST	MUST	Y	Y
SyncType	MUST	MUST	Y	Y
Tx	MAY	MUST	Y	Y
Tx-Pref	MUST	MUST	Y	Y
UTC	MAY	MAY	Y	Y
ValEnum	MUST	SHOULD	Y	N
VerCT	MUST	MUST	Y	Y
VerDTD	MUST	MUST	Y	Y
Xnam	MAY	MAY	N	N
Xval	MAY	MAY	N	N

4.6 Meta Info

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML Meta Information as defined in [4].

Element Type	Required of Client		Implemented in Client	
	Sending	Receiving	Sending	Receiving
Anchor	MUST	MUST	Y	Y
EMI	MAY	MAY	N	N
Format	MUST	MUST	Y	Y
FreeID	SHOULD	MAY	N	N
FreeMem	SHOULD	MAY	N	N

Last	MUST	MUST	Y	Y
Mark	MAY	MAY	N	N
MaxMsgSize	MAY	MUST	Y	Y
MaxObjSize	SHOULD	SHOULD	Y	Y
Mem	SHOULD	MAY	N	N
MetInf	MUST	MUST	Y	Y
Next	MUST	MUST	Y	Y
NextNonce	MAY	MUST	Y	Y
SharedMem	SHOULD	MAY	N	N
Size	MAY	MAY	Y	Y
Type	MUST	MUST	Y	Y
Version	MAY	MAY	N	N

4.7 Protocol

This section contains the ICS Proforma for the Static Conformance Requirements for the Sync Protocol as defined in [2].

Element Type	Client Requirements	
	Required	Implemented
Support of 'two-way sync'	MUST	Y
Support of 'slow two-way sync'	MUST	Y
Support of 'one-way sync from client only'	MAY	Y
Support of 'refresh sync from client only'	MAY	Y
Support of 'one-way sync from server only'	MAY	Y
Support of 'refresh sync from server only'	MAY	Y
Support of 'sync alert'	MAY	N
Support of multiple messages per package	MUST	Y
Support of combined package 1 and 3	MAY	N
Support of 'large object handling'	SHOULD	Y
Support of 'number of changes'	MAY	Y

4.8 Authentication

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML Authentication as defined in [2].

Note that authentication is only required for SyncHdr, optional for datastore.

Authentication Type	Client Requirements	
	Required	Implemented
Basic (name and password)	MUST	Y
MD5	MUST	Y

4.9 MIME header types

This section contains the ICS Proforma for the Static Conformance Requirements for SyncML MIME Media Types as defined in [3].

NOTE: the client MUST support one of the two MIME header types.

MIME Header Type	Client Requirements	
	Required	Implemented
"application/vnd.syncml+xml"	MUST if no wbxml	N
"application/vnd.syncml+wbxml"	MUST if no xml	Y

5 TRANSPORT CONFORMANCE

5.1 HTTP Transport

Vendors should fill this section out ONLY if their product uses the HTTP Transport. The specification for HTTP Transport is fully described in[6].

NOTE that the tables only indicate the required data.

Method	Requirements	
	Required	Implemented
POST	MUST	Y

General Headers	Requirements	
	Required	Implemented
Cache-Control: no-store, private	MUST	Y
Transfer-Encoding: chunked	MUST	Y

Request Headers	Requirements	
	Required	Implemented
Accept	MUST	Y
Accept-Charset	MUST	Y
Authorization	MUST	Y
Proxy-Authorization	MUST if a proxy client	N
User-Agent	MUST	Y

Response Headers	Requirements	
	Required	Implemented
Authentication-Info	MUST	N
Proxy-Authenticate	MUST if proxy client	N
WWW-Authenticate	MUST	N

5.2 OBEX Transport

Vendors should fill this section out ONLY if their product uses the OBEX Transport. The specification for OBEX Transport is fully described in [7]. Note that these definitions of client and server are the OBEX definition, not the SyncML definition.

NOTE that the tables only indicate the required data.

Method	OBEX Server Requirements	
	Required	Implemented
GET	MUST	
PUT	MUST	
CONNECT	MUST	
DISCONNECT	MUST	
ABORT	MUST	

Method	OBEX Client Requirements	
	Required	Implemented
GET	MUST	
PUT	MUST	
CONNECT	MUST	
DISCONNECT	MUST	

5.3 WSP Transport

Vendors should fill this section out ONLY if their product uses the WSP Transport. The specification for WSP Transport is fully described in [8].

NOTE that the tables only indicate the required data.

Method	Requirements	
	Required	Implemented
POST	MUST	Y

6 ADDITIONAL INFORMATION

Please use this section to provide any additional information with regards to your Implementation Conformance Statement. Please do not annotate the previous sections.

Content Formats Supported – this would depend on the actual databases installed on the device supporting these formats

Protocol support of Sync Types may also depend on what the database installed on the device supports.

On 5.1 HTTP Transports: - Response Headers:

Authentication-Info is changed into a ‘MAY’ in the Change document for SyncML HTTP Binding (changes_for_syncml_http_V11_20020215.pdf),

WWW-Authentication is also changed into a ‘MAY’ in the same document.

7 REFERENCES

[1] SyncML Representation Protocol, version 1.1.1

[2] SyncML Sync Protocol, version 1.1.1

[3] SyncML Representation Protocol, Data Synchronization Usage, version 1.1.1

[4] SyncML Meta-Information DTD, version 1.1.1

[5] SyncML Device Information DTD, version 1.1.1

[6] SyncML HTTP Binding, version 1.1.1

[7] SyncML OBEX Binding, version 1.1.1

[8] SyncML WSP Binding, version 1.1.1