# SyncML Implementation Conformance Statement Proforma

# Version 1.0

## Abstract

The SyncML Implementation Conformance Statement is designed to be used by vendors to show their level of conformance with SyncML specifications.

Note that if your product can perform as both a client and a server, you will need to fill out both sets of forms.

## SyncML Initiative

The following companies are Sponsors of the SyncML Initiative:

Ericsson
IBM
Lotus
Matsushita Communications Industrial Co., Ltd.
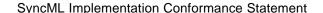Motorola
Nokia
Openwave
Palm, Inc.
Psion
Starfish Software
Symbian

## Revision History

| Revision | Date | Comments |
|----------|------|----------|
| 1.0 | 2001-11-02 | Finalized for release. |

## Copyright Notice

# Table of Contents

# 1 Introduction

The purpose of this statement is to define a methodology for showing conformance with the SyncML Representation protocol [1], SyncML Sync Protocol [2] and appropriate transport.  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 with the two cases or packages 1 & 3 being sent seperately and combined.

# 2 Product Information

## 2.1 Device and Contact Information

| | |
|---|---|
| Device Name & Version | Neosteps SyncLE Client for BREW |
| Company | Neosteps, Inc. |
| Contact Name | KyungNyong Kim |
| Contact Phone | +82-31-788-7500 |
| Contact Email | knkim@neostpes.com |
| Transports supported | OBEX [ ]   WSP [ ]   HTTP [O] |
| Product is | Client [O]   Server [ ] |

## 2.2 Content Formats Supported

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 | |
| | vCard 3.0   (optional) | |
| Calendar | vCalendar 1.0 | Y |
| | iCalendar 2.0  (optional) | |
| Memos | text/plain | |
| Tasks | vTodo 1.0 | |
| Email | message/rfc822 | |
| | message/rfc2822 | |
| | Message/rfc2045 | |

# 3  Server Conformance Tables

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

| 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 | | |
| MsgID | MUST | MUST | | |
| MsgRef | MUST | MUST | | |
| NoResp | MAY | MUST | | |
| NoResults | MAY | MAY | | |
| 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

| 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

| 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

| 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

| 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 | | |
| SwV | MAY | SHOULD | | |
| SyncCap | MUST | MUST | | |
| SyncType | MUST | MUST | | |
| Tx | MAY | MUST | | |
| Tx-Pref | MUST | MUST | | |
| ValEnum | SHOULD | MUST | | |
| VerCT | MUST | MUST | | |
| VerDTD | MUST | MUST | | |
| Xnam | MAY | MAY | | |
| Xval | MAY | MAY | | |

## 3.6 Meta Info

| 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 | | |
| 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

| 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 multiple messages per package | MUST | |
| Support of combined package 1 and 3 | MUST | |

## 3.8    Authentication

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

## 3.9    MIME header types

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

# 4 Client Conformance Tables

## 4.1 Representation Common Use Elements

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

*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

| Command | Required of Client | | Implemented in Client | |
|---|---|---|---|---|
| | Sending | Receiving | Sending | Receiving |
| SyncML | MUST | MUST | Yes | Yes |
| SyncHdr | MUST | MUST | Yes | Yes |
| SyncBody | MUST | MUST | Yes | Yes |

## 4.3 Data description elements

| Command | Required of Client | | Implemented in Client | |
|---|---|---|---|---|
| | Sending | Receiving | Sending | Receiving |
| Data | MUST | MUST | Yes | Yes |
| Item | MUST | MUST | Yes | Yes |
| Meta | MUST | MUST | Yes | Yes |

## 4.4 Representation Protocol command elements

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

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

## 4.5    Device Info

| Element Type | Required of Client | | Implemented in Client | |
|--------------|---------|-----------|---------|-----------|
| | Sending | Receiving | Sending | Receiving |
| CTCap | MUST | SHOULD | Yes | |
| CTType | MUST | MUST | Yes | Yes |
| DataStore | MUST | MUST | Yes | Yes |
| DataType | MAY | MAY | | |
| DevId | MUST | MUST | Yes | Yes |
| DevInf | MUST | MUST | Yes | Yes |
| DevTyp | MUST | MUST | Yes | Yes |
| DisplayName | MAY | MAY | | |
| DSMem | SHOULD | MAY | | |
| Ext | MAY | MAY | | |
| FwV | SHOULD | MAY | | |
| HwV | SHOULD | MAY | | |
| Man | SHOULD | MAY | | |
| MaxGUIDSize | MUST | MUST NOT | Yes | |
| MaxID | SHOULD | MAY | | |
| MaxMem | SHOULD | MAY | | |
| Mod | MAY | MAY | | |
| OEM | MAY | MAY | | |
| ParamName | SHOULD | SHOULD | | |
| PropName | MUST | SHOULD | Yes | |
| Rx | MAY | MUST | | Yes |

| Rx-Pref | MUST | MUST | Yes | Yes |
|---|---|---|---|---|
| SharedMem | SHOULD | MAY | | |
| Size | MAY | MAY | | |
| SourceRef | MUST | MUST | Yes | Yes |
| SwV | SHOULD | MAY | | |
| SyncCap | MUST | MUST | Yes | Yes |
| SyncType | MUST | MUST | Yes | Yes |
| Tx | MAY | MUST | | Yes |
| Tx-Pref | MUST | MUST | Yes | Yes |
| ValEnum | MUST | SHOULD | Yes | |
| VerCT | MUST | MUST | Yes | Yes |
| VerDTD | MUST | MUST | Yes | Yes |
| Xnam | MAY | MAY | | |
| Xval | MAY | MAY | | |

## 4.6  Meta Info

| Element Type | Required of Client | | Implemented in Client | |
|---|---|---|---|---|
| | Sending | Receiving | Sending | Receiving |
| Anchor | MUST | MUST | Yes | Yes |
| EMI | MAY | MAY | | |
| Format | MUST | MUST | Yes | Yes |
| FreeID | SHOULD | MAY | | |
| FreeMem | SHOULD | MAY | | |
| Last | MUST | MUST | Yes | Yes |
| Mark | MAY | MAY | | |
| MaxMsgSize | MAY | MUST | | Yes |
| Mem | SHOULD | MAY | | |
| MetInf | MUST | MUST | Yes | Yes |
| Next | MUST | MUST | Yes | Yes |
| NextNonce | MAY | MUST | | Yes |
| SharedMem | SHOULD | MAY | | |
| Size | MAY | MAY | | |
| Type | MUST | MUST | Yes | Yes |
| Version | MAY | MAY | | |

## 4.7  Protocol

| Element Type | Client Requirements | |
|---|---|---|
| | Required | Implemented |
| Support of 'two-way sync' | MUST | Yes |
| Support of 'slow two-way sync' | MUST | Yes |
| 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 multiple messages per package | MUST | Yes |
|---|---|---|
| Support of combined package 1 and 3 | MAY | |

## 4.8    Authentication

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

| Authentication Type | Client Requirements | |
|---|---|---|
| | Required | Implemented |
| Basic (name and password) | MUST | Yes |
| MD5 | MUST | Yes |

## 4.9    MIME header types

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 | |
| "application/vnd.syncml+wbxml" | MUST if no xml | Yes |

# 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 0.

NOTE that the tables only indicate the required data.

| Method | Requirements | |
|---|---|---|
| | Required | Implemented |
| POST | MUST | Yes |

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

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

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

## 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 0.  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 0.

NOTE that the tables only indicate the required data.

| Method | Requirements | |
|--------|:-----:|:-----:|
| | Required | Implemented |
| POST | MUST | |

# 6  References

[1]    SyncML Representation Protocol Specification

[2]    SyncML Sync Protocol

[3]    Meta Information Specification and DTD

[4]    Device Information Specification and DTD

[5]    SyncML HTTP Binding

[6]    SyncML OBEX Binding

[7]    SyncML WSP Binding