



Using vCard files with the Skype client

A Connectotel White Paper

Prepared by
Marcus Williamson
Connectotel
London, UK
<http://www.connectotel.com/>
marcus@connectotel.com

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1.0 Introduction

This paper is intended for Skype users and developers who wish to make use of the vCard functionality which was introduced in the Skype client version 1.2, but has remained undocumented until now.

The vCard specification describes a standard for the interchange of “business card” information. The Skype client allows the importing and exporting of vCard data to and from the Skype Contacts list using options in the Skype client Tools menu.

This paper will not discuss the design or development of applications using the Skype API, as this subject is already covered in the Skype API documentation.

2.0 The vCard format

2.1 vCard specification

The vCard specification for the interchange of business card information is defined in the document RFC 2426 “vCard MIME Directory Profile”, published in September 1998.

The vCard format is used by a variety of commonly-used applications, such as, for example Microsoft Outlook Express and mobile phone address books. It is now also used by the Skype client software. The principal benefit of vCard is that it defines a common format for importing and exporting contact data, independently of any specific software application. As an openly-available specification it is not at the mercy of any individual software manufacturer, which might otherwise change the format between software versions.

Before the advent of vCard, one would typically use CSV (comma-separated value) format files to import and export address book data to and from applications. However, other than their punctuation (comma-separated), there was no standard for the layout of these files, nor for the data records or fields contained within them. The vCard format overcomes this issue by incorporating the field name as an identifying prefix within each data record.

A vCard file consists of one or more data records, in a format consisting of a header:

```
BEGIN:VCARD
```

followed by a number of data fields, containing the actual vCard data, followed by a footer:

```
END:VCARD
```

Each line, corresponding to a field within the data record, starts with a label for the field name, followed by a colon followed by the field data itself. At a minimum, the vCard specification states that the vCard should contain at least three data fields, as follows:

```

BEGIN:VCARD
VERSION:2.1
N: jdoe
FN:John Doe
END:VCARD

```

The file extension for vCard files is usually “.vcf”. So, a file containing vCard data will be called filename.vcf.

Note: Some versions of MS Windows automatically associate vcf files with the Windows Address Book. So, be aware that double-clicking on a vcf file in Windows Explorer may launch the Address Book application.

2.2 Example vCard File entry

Here is an example of a single record taken from a vCard file exported from the Skype client:

```

BEGIN:VCARD
N:marcuswilliamson
X-SKYPE-USERNAME:marcuswilliamson
FN:Marcus Williamson (Connectotel)
BDAY:20010401
X-SKYPE-SEX:1
X-SKYPE-LANGUAGE:en
X-SKYPE-COUNTRY:gb
X-SKYPE-CITY:London
URL:http://www.connectotel.com/
ADR;;;London;;;
X-SKYPE-BUDDYSTATUS:2
X-SKYPE-ISAUTHORIZED:1
REV:01050510T153134Z
END:VCARD

```

The vCard record contains a mixture of “standard” vCard fields, defined in RFC 2426, together with Skype-specific extensions. The standard and Skype-specific fields are described in sections 2.3 and 2.4 below.

2.3 Standard vCard data fields

The following data fields can be used in any generic vCard file:

Data field name	Description	Format / Note	RFC 2426 section
ADR:	Postal Address	Separated by semicolons	3.2.1
AGENT:	Person who acts on behalf of this user	(Not used by Skype)	3.5.4
BDAY:	Birthday	YYYYMMDD	3.1.5

		Year (4 digit) Month Day (Not used by Skype)	
CATEGORIES:	Allows definition of categories for a user	(Not used by Skype)	3.6.1
CLASS:	Security access classification for this user record	(Not used by Skype)	3.7.1
EMAIL:	E-mail address	user@domain When exporting from Skype, this entry will only be present in the local user's own record. It is not visible for other Skype users for privacy reasons.	3.3.2
FN:	Full name	According to RFC 2426 this field must be present.	3.1.1
GEO:	Longitude and latitude of the user	(Not used by Skype)	3.4.2
KEY:	Security key associated with this user	(Not used by Skype)	3.7.2
LABEL:	Postal address label	(Not used by Skype)	3.2.2
LOGO:	Logo	Can be used to store company logo (Not used by Skype)	3.5.3
MAILER:	Specifies the type of e-mail software used by the user	(Not used by Skype)	3.3.3
N:	Short name	When exporting from Skype this field contains the Skype name and has the same information as the field X-SKYPE-USERNAME According to RFC 2426 section 3.1.2 this field must be present.	2.1.2
NICKNAME:	Nickname	(Not used by Skype)	3.1.3
NOTE:	Notes	Often specified within Skype vCard files as: NOTE;ENCODING=QUOT ED-PRINTABLE:	3.6.2
ORG:	Organisation	(Not used by Skype)	3.5.5
PHOTO:	Photograph	Always specified within Skype vCard files as: PHOTO;TYPE=JPEG;ENCODING=BASE64:	
PRODID:	Product ID for the product which created the vCard	(Not used by Skype)	3.6.3
REV:	Revision	Specifies the date and time at which this object was written to the vCard file.	3.6.4

ROLE:	User's role with the organisation	(Not used by Skype)	3.5.2
SORT-STRING:	Name to be used for sorting name data	(Not used by Skype)	3.6.5
SOUND:	Digital sound information to annotate some aspect of the vCard	(Not used by Skype)	3.6.6
TEL;CELL:	Cellphone Number		3.3.1
TEL;HOME:	Home Telephone Number		3.3.1
TEL;WORK:	Work Telephone Number		3.3.1
TITLE:	Title	(Not used by Skype)	3.5.1
TZ:	Timezone of the user	(Not used by Skype)	3.4.1
UID:	Globally unique identifier for the user	(Not used by Skype)	3.6.7
URL:	Website address		3.6.8
VERSION:	Version of the vCard specification used to format this vCard	(Not used by Skype)	3.6.9

If a field requires additional encoding information then this is specified between the field name and the terminating colon. For example:

PHOTO;TYPE=JPEG;ENCODING=BASE64:

This definition indicates that the content for the PHOTO data field is stored in JPEG format using Base64 encoding. The use of content encoding for the data field is discussed in section 2.5 below.

2.4 Skype-specific vCard data fields

The following fields are Skype-specific extensions to the vCard format, all of which are identifiable by the prefix "X-SKYPE-" prior to the name of the data field:

Data field name	Description	Format / Note
X-SKYPE-AUTHCERTIFICATE:	Skype authorisation certificate, provided by the other Skype user.	X-SKYPE-AUTHCERTIFICATE;ENCODING=BASE64: This field is only present if X-SKYPE-BUDDYSTATUS has a value of 3
X-SKYPE-BUDDYSTATUS:	Status of user in the Contacts list	0 : The user has never been in the Contacts list 1 : The user was in the Contacts list but has been deleted 2 : The user is pending authorization 3 : The user is in the

		Contacts list
X-SKYPE-CITY:	User's city	ASCII Text
X-SKYPE-COUNTRY:	User's country	A 2 character code defined by the ISO 3166 standard.
X-SKYPE-DISPLAYNAME:	Full name of the user to be displayed within the Skype client	ASCII Text
X-SKYPE-ISAUTHORIZED:	0 or 1	0 : User is not authorized 1 : User is authorized
X-SKYPE-ISBLOCKED:	0 or 1	0 or not present : User is not blocked 1 : User is blocked
X-SKYPE-LANGUAGE:	User's language	A 2 character code defined by the ISO 639 standard.
X-SKYPE-PROFILE:	Not present or 1	1: This is the entry for the local user.
X-SKYPE-PROVINCE:	User's province	ASCII Text
X-SKYPE-SEX:	Gender of the contact	0: Unknown 1: Male 2: Female
X-SKYPE-USERNAME:	Skypename	When exporting from Skype this field contains the Skypename and has the same information as the field "N:" (short name)

Note: A full list of ISO 3166 country codes can be found on the ISO site here:

<http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/index.html>

A full list of ISO 639 language codes can be found here:

<http://www.iso.org/iso/en/prods-services/popstds/languagecodes.html>

The "local user" can be identified in a vCard file exported from Skype by the following elements:

- There is a field present containing X-SKYPE-PROFILE:1.
- There is an EMAIL: field present.
- There are no X-SKYPE-BUDDYSTATUS or X-SKYPE-ISAUTHORIZED fields, as a user does not have a buddystatus or authorization status in relation to himself/herself.

2.5 Encoding

Several of the fields above contain data which is not plain ASCII text format. In these cases the data is saved in an encoded format whose description is stored as a supplement to the data field name.

For example, this syntax indicates that the Skype Authorisation Certificate contains binary data which is stored in the vCard file as Base64 encoded data:

X-SKYPE-AUTHCERTIFICATE;ENCODING=BASE64:

This syntax indicates that the Full Name field to follow contains UTF-8 data:

FN;CHARSET=UTF-8;ENCODING=8BIT:

Likewise, the PHOTO data field is specified as:

PHOTO;TYPE=JPEG;ENCODING=BASE64:

To decode data present in Base64 format it is possible to use WinZip, or a MIME decode library function within your chosen programming language. To do this, it is necessary to copy the data after the “:” and to add MIME headers to the data. The data should be presented as, for example:

Content-Type: application/octet-stream; name="authdata.txt"

Content-Transfer-Encoding: base64

Content-Disposition: inline; filename="authdata.txt"

AAABBAAAAAF0ehKkOJ/SwJohude5g5T/7NU1VWYRPZfgB7U6ROb/+zOR7OGBQTKqCEj
WZBQRQVWwb8EWgh9KhnfzGfVUZB+Z3hzwcsesuL8HAz5yhoLCm0uozgh10YK35/EiC
SBXb8VNFLprNa+jxXlbDK6nWgjyJlVzGjl3DcP8IYkjtUTxrDDIpabcRMNIyA241lHt
dkPYjkY/7fu3PYAX7p9BAqLvmNdqpMm+4jidXXlQuuZExWry2jUq6n76kDm3Vo5MPcr
RSCVputxW3Awgn0E3eDs08BtZoOrSw/ezgsmxm2MrsAPT6f/NMfiGGJ2cbsiNIWLWQ8
011tVwj7KNireNve2DhBXipxMZmNNCTGjaZiPBhxe3lHYqgxCnn2EwdkdBM9xUNQknN
pL+01FlIfZlF3x4WmoJ/5zjOfAcoTIDS9I3iiklGasVVkTdhDHRCZmpDPtJ3P3W25bF
AwE4heZo2M4LgJO0NeBe2pH7rFSfHS6e95qa+ttt56BaI7Q6xVUoug=

The fields shown above in bold, including “---” and “-----”, have been added to the data to allow it to be decoded by WinZip or a MIME decode library function.

3.0 Export and Import of vCard files within the Skype Client

The Skype client, from version 1.2 onwards, provides options to export and import vCard files from and to the Skype Contacts list.

3.1 Export

The export of the Contacts list to a file is performed using the Skype client menu option **Tools / Export Contacts to vCard File**. A prompt for a filename is offered, which by default is “yourskypename.vcf”.

Selecting “Save” will cause the entire Contacts list to be saved to the chosen file in vCard format.

3.2 Import

The import of new entries into the Contacts list from a file is performed using the Skype client menu option **Tools / Import Contacts from vCard File**. By default, the Skype client will look for files with the extension “.vcf”, although any other file containing information in vCard format can be chosen.

4.0 Example uses

This section describes a number of example uses for the vCard format including:

- Contacts list backup
- Exporting Skype contacts to Outlook Express
- Exporting an Outlook Express contact to Skype
- Maintaining a centralised block list
- Maintaining an organisation-wide address book
- Importing address books from other systems

These are just a few ideas which, it is hoped, will stimulate the development of other ways of using this technology.

4.1 Contacts list backup

The most obvious use for the vCard export facility is to provide a backup for an existing Skype Contacts list. To back up the Contacts list it was previously necessary to use a third-party product or to copy part of the Skype file system to another computer. Now, the user can simply use the Skype menu option **Tools / Export Contacts to vCard file**.

The resulting vCard file can be uploaded to a web server using FTP or sent via e-mail to a friend, to provide an off-site backup copy.

4.2 Exporting Skype contacts to Outlook Express

To export Skype contacts to Outlook Express, use the following procedure:

In Skype:

- Choose the menu option **Tools / Export Contacts to vCard file**
- Choose a filename and click “Save”

In Outlook Express:

- Choose the menu option **Tools / Address Book**
- Choose file option **File / Import / Business Card (vCard)**
- Choose the file previously saved from Skype
- The contacts will then be imported one by one from the vCard file

4.3 Exporting an Outlook Express contact to Skype

To export an Outlook Express contact to Skype, use the following procedure:

In Outlook Express:

- Choose the menu option **Tools / Address Book**
- Choose the entry you wish to export
- Choose the option **File / Export / Business Card (vCard)**
- The contact will then be exported to a vCard file

In Skype:

- Choose the option **Tools / Import Contacts from vCard file**
- Choose a filename and click "Open"
- The contact will be imported from the vCard file into the Skype Contacts list

4.4 Maintaining a centralised Skype block list

There may be occasions when it may be necessary to block one or more users who have misused the Skype software.

In order to maintain a central block list, an administrator can make available on a server on the Internet or Intranet a file named, for example, unwanted.vcf, containing entries in the following format:

```
BEGIN:VCARD
N:unwanteduser
FN:Unwanted User
X-SKYPE-USERNAME:unwanteduser
X-SKYPE-ISBLOCKED:1
REV:01050608T092445Z
END:VCARD
```

```
BEGIN:VCARD
N:anotherunwanteduser
FN:Another Unwanted User
X-SKYPE-USERNAME:anotherunwanteduser
X-SKYPE-ISBLOCKED:1
REV:01050608T092445Z
END:VCARD
```

The file could then be downloaded and imported into Skype to block the unwanted users.

4.5 Maintaining an organisation-wide address book

At the time of writing, the Skype client (version 1.2/1.3) does not currently have a mechanism for maintaining a shared addressbook across a company or other organisation.

Using a vCard file, an administrator could make available, on a central server, a “master” vCard file containing all the contact details across an entire organisation. This would be done by maintaining one “master” user with up-to-date contact details for all users. Then, this user’s addressbook would be exported in vCard format and uploaded to a known location and filename on a central file server or web server.

When a user wishes to obtain the latest “master” file, he/she would simply copy or download the file, then use the option within the Skype client **Tools / Import Contacts from vCard File**.

As a more advanced option, an administrator could output data from an organisation’s corporate directory, often accessible via Lightweight Directory Access Protocol (LDAP). The LDAP file information could be manipulated to create data in vCard format and the resulting vCard “master” file could be made available to Skype users in the same way as described above.

4.6 Importing address books from other e-mail systems

In addition to being able to import and export the Contacts list in vCard format, as discussed in this article, the Skype client software already includes software for importing contacts from several other environments. These utilities are undocumented and are located in the folder named:

C:\Program Files\Skype\Phone\ImportContacts

The utilities are:

msn-import.exe	Import from MSN
opera-import.exe	Import from Opera
outlook-import.exe	Import from MS Outlook
wab-import.exe	Import from MS WAB (Windows Address Book) format

Using these utilities in conjunction with Skype’s vCard import/export capability opens up the possibility of using the Skype client as a universal address book conversion tool.

So, for example, if an administrator has contacts in MS Outlook which he/she wishes to make available to other users then he/she could simply:

- Run outlook-import.exe to retrieve the contacts into the Skype client.
- Use the Skype client **Tools / Export Contacts to vCard file** option to save a vCard version of the Contacts list.
- Publish the resulting vcf file on an internal file server or web server.

5.0 Conclusion

This paper has described a new Skype client feature, available from version 1.2 onwards, which allows the export and import of contact information in vCard format. It is hoped that this documentation will be helpful to users of Skype and developers of Skype applications in making use of this new feature.

6.0 Acknowledgements

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8.0 Contacts

Marcus Williamson, Connectotel - London, UK
<http://www.connectotel.com/>
E-mail: marcus@connectotel.com