



Skype Payment API “SkypePay”

Discussion Document

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1.0 Introduction

Third party companies have requested that Skype creates a service to allow payments for goods and services from funds held in the user's SkypeOut account.

This new service is code-named "SkypePay" for the purposes of this document. The development of SkypePay, as proposed here, would involve some changes to the existing Skype backend infrastructure, as well as the creation of an Application Programming Interface (API) to allow third-party software to use SkypePay.

SkypePay represents a valuable business opportunity for Skype in that it provides an additional revenue stream and adds significant perceived value to the Skype client software. With SkypePay in place, the SkypeOut account is no longer only used to pay for PSTN telephone calls, but can now be used to make micropayments for other low-value goods and services. For every transaction, Skype will benefit by taking a slice of the revenue gained from the end-user.

The following document outlines the requirements from Connectotel for a payment API for use with the Skype client software. This requirements document has been created bearing in mind two primary considerations, namely security for the end user and ease of integration by Skype into the existing Skype infrastructure. The API functionality described in section 3.0 has been modelled on the existing Skype API conventions.

2.0 Concepts

The proposed design for SkypePay would allow any Skype user to make use of his/her existing SkypeOut account to pay for goods and services. At the most basic level, the process of making a payment via SkypePay can be considered as a transfer of an amount between one Skype user's SkypeOut account and another.

A SkypePay transaction would be started by an application at the client which invokes the SkypePay API using the PAY function described in section 3.1 below. The SkypePay backend service, together with the Skype client, would carry out a series of verification steps (including prompting the user to confirm the action), then transfer a payment from the requesting user's SkypeOut account to the account of the selected vendor. Additionally a portion of the payment would be directed to Skype as a commission for the use of the SkypePay service.

The vendor who receives the payment for the transaction would accumulate payments in his/her own SkypeOut account. Depending on a pre-negotiated agreement (see section 4.0) between vendor and Skype, the vendor would be paid out on a regular basis, based on the credit amount accumulated in his/her SkypeOut account.

2.1 Security

To avoid abuse of the service, the following safeguards would be in place:

- The user must have a SkypeOut account with a balance equal to, or more than, the intended payment amount.
- The vendor's SkypeName must be registered with Skype as a SkypePay vendor. This means that his/her SkypeOut account can be credited by payments from other users.
- The user can enable/disable SkypePay within the Skype client. This sets the value of the SKYPEPAY privilege which can be obtained via the API (see section 3.2 below).
- The user must answer "Yes" to the pop-up prompt when the PAY command is invoked (see section 3.1 below), an example of which could be:

Do you wish to pay [amount] to [vendor-skypename] for [subject] ?

- The user can see at any time what SkypePay transactions have been carried out on his/her account via the standard SkypeOut "Call List" on the Skype website.

2.2 Examples

Stock price: An application, running in conjunction with the Skype client, prompts the user for the stock symbol to be checked. The application gets the current quote for the requested stock symbol and the Skype client displays:

Do you wish to pay 0.15 Euros to "stockprice" for
ABCD stock quote?

Upon receiving confirmation from the user, the stock quote is displayed as a chat message and the user's account is debited 0.15 for the information supplied.

SMS (GSM Short Message Service): An application, running in conjunction with the Skype client, prompts the user for the text of the message and the number to which it should be sent. The Skype client displays the message:

Do you wish to pay 0.10 Euros to "msggateway" for SMS message to
+44234567890?

If the user confirms "Yes", then the SMS message will be sent and the user's Skypeout account will be debited for the price of the SMS message.

Horoscope: An application, running in conjunction with the Skype client, sends a message to the horoscope server including the user's date of birth. The application receives confirmation from the horoscope server of the user's star sign and the Skype client displays:

Do you wish to pay 0.25 Euros to "horoscope-server" for
Aquarius horoscope?

Upon receiving confirmation from the user, the horoscope application displays today's horoscope as a chat message. The user's account is debited for 0.25 Euros for the horoscope information.

3.0 SkypePay API functions

Skype users and developers are already familiar with the use of the SkypeOut feature of their Skype client software. Connectotel proposes that Skype add hooks into SkypeOut, in the form of a SkypePay API, to allow third-parties to debit the SkypeOut account in a secure manner.

The proposed API changes below include:

- PAY command – to carry out the actual payment
- New privilege option SKYPEPAY – to determine whether the user has enabled SkypePay
- New user property SKYPEPAY-VENDOR – to determine whether a user is a registered SkypePay vendor
- New SEARCH parameter

3.1 PAY command

```
PAY [vendor-skypename] [payment-amount] [subject-text]
```

For example:

```
PAY msggateway 0.10 "Skype to SMS to +44123456789"
```

The execution of the PAY command will start the following process, using a combination of frontend (client) and backend logic:

- Check that the user [vendor-skypename] exists
 - Otherwise: Error 9 – Unknown user
- Check that the user [vendor-skypename] is not on the local user's block list
 - Otherwise: Error 39 – User blocked
- Check that the user's SKYPEPAY privilege is set to TRUE
 - Otherwise: Error newnumber – No SkypePay privilege
- Check that the payment-amount being requested does not exceed the user's current SkypeOut balance
 - Otherwise: Error newnumber – Insufficient balance
- Check that vendor-skypename is a member of the SkypePay vendor program
 - Otherwise: Error newnumber – Invalid vendor
- Prompt the user to confirm go-ahead with the payment (Yes/No), as described in section 2.1 above
- Deduct the amount from the user's SkypeOut account
- Transfer the amount, minus the commission percentage, to the SkypeOut account of vendor-skypename
- Transfer the amount of the commission percentage to Skype

3.2 New privilege option

Current privileges defined by the Skype API include: SKYPEOUT, SKYPEIN and VOICEMAIL.

A new privilege option SKYPEPAY should be added which determines whether or not a user has allowed third parties to access his/her SkypeOut account. The API command:

```
GET PRIVILEGE SKYPEPAY
```

would return:

```
PRIVILEGE SKYPEPAY TRUE  
or  
PRIVILEGE SKYPEPAY FALSE
```

The ability to set the value of this parameter should be provided to the user within the Skype client. It should not be possible to set this value via the API. This will ensure that the user maintains absolute control over the potential use of his/her SkypeOut account by third parties.

3.3 New user property

For vendors, an additional property would be defined within the Skype user object, which could only be managed by Skype but which could be queried using the API at the client:

```
GET USER skypeusername SKYPEPAY-VENDOR
```

would return:

```
USER skypeusername SKYPEPAY-VENDOR TRUE  
or  
USER skypeusername SKYPEPAY-VENDOR FALSE
```

This flag would be used at the backend during the payment process to determine whether a user is a registered SkypePay vendor.

3.4 Reporting

A new SEARCH parameter would be made available:

Syntax: SEARCH PAYMENTS [*TARGET*]

TARGET - username. Target is optional. If target is specified then only the payment history between current user and target user is searched. The syntax of this command follows the same format as other SEARCH commands such as "SEARCH CALLS".

The return values should contain at least:

```
date time vendor-skypeusername payment-amount subject
```

This reporting option is not essential in a first release, as a web-based reporting functionality would already be available in the "Call List" report on the Skype website.

4.0 Commercial Contract

Prior to allowing the use of SkypePay by a third-party to allow payments to be taken from users' SkypeOut accounts, Skype and the third party must have in place a contract which specifies at minimum:

- The amount of commission to be taken per transaction, as a percentage of the transaction, or as a fixed amount per transaction
- The minimum SkypeOut account balance required for an outbound payment to be made from the vendor's SkypeOut account to their chosen destination
- The destination for payment: bank, credit card, PayPal account
- The frequency of payment

5.0 Legal

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