

Voiceserve Inc.

VoipSwitch softphones

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Introduction and solution overview

This document is technical proposal for SIP based VoIP Client developed by VoipSwitch – Voiceserve company.



Vippie Mobile targets the wireless handset market. The objective is to enable mobile users to access VoIP telephony communications via their Vippie Mobile.

VoipSwitch – Voiceserve offers unrivaled softphones for all popular Smartphone platforms. Support for high rate compression codecs, SMS , VoIP Tunnel solution and more.

- iPhone/iPod - with uploading to provider's AppStore account
- Symbian/Nokia all popular models
- Android Google
- BlackBerry
- Windows Mobile PDAs and Smart phones

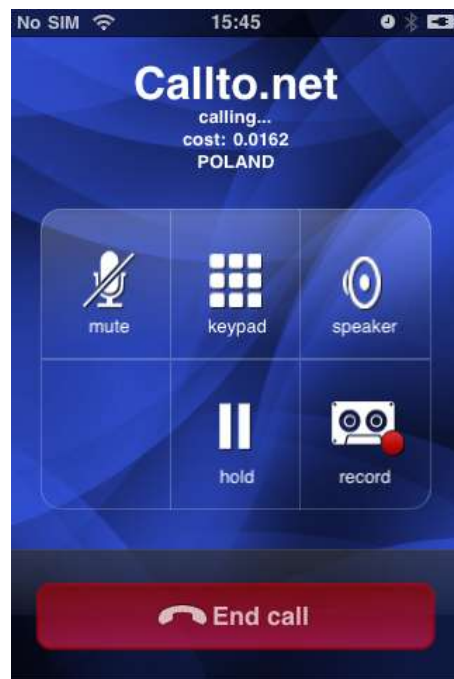
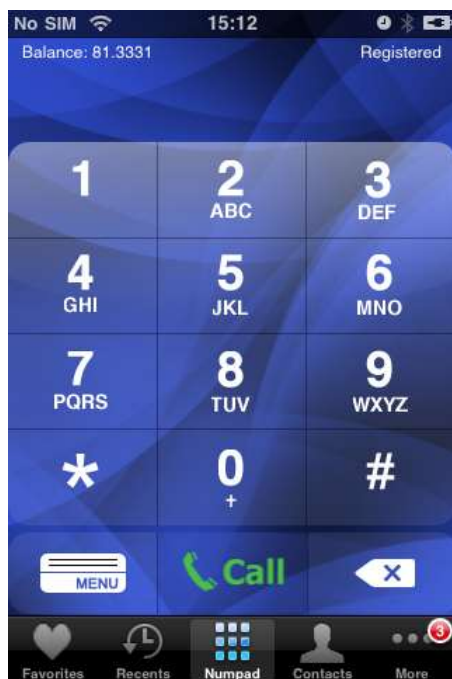


Softphones are linked to provider's server address and no additional software configuration is needed. Once end-user install application and enters mobile VoIP account information's softphone is ready to use.



iPhone mobile softphone

- Vippie Mobile softphone for iPhone, iPod and iPad is a SIP client that works on all models of Apple's smartphones.
- Internet connection through WIFI, GPRS, EDGE or UMTS
- The softphone supports the following voice codecs: G729, G711, GSM and High Definition G722
- Vippie Mobile, a white-label branded softphone, can work with VoipSwitch and also with a 3rd party SIP servers
- The softphone can be linked to an IP address of a VoipSwitch (or a sip server) or to DNS name for example sip.mymobilevoipcalls.com
- In addition Vippie supports the In App purchase payment method.



Main Features:

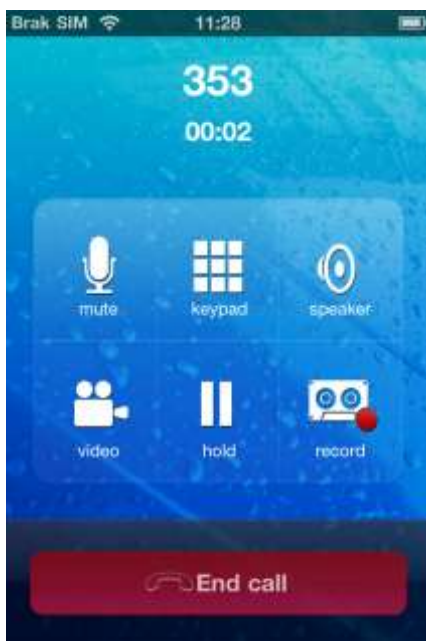
- Making and receiving SIP calls
- Multitasking, receiving calls in background (using TCP connection)
- Integrated contacts from the phone
- Loudspeaker
- Favorites
- Balance information*
- Destination rate information*
- Time, call status logs
- Last calls log
- Redial



- Compatible with iPod, iPhone 2G/3G /4G & iPad
- Optionally built-in Callback client for triggering conferences with two numbers*
- Voicemail fully integrated with VoipSwitch platform
- Sending and receiving SMS*
- Conversation recording and Sharing it on iTunes
- Instant messaging over XMPP, chat and presence
- *Instant messaging over SIP SIMPLE to be released in April 2011*

Version with Video for iPhone 4G:

- Video SIP client for iPhone 4G.
- In addition to the features described above, this version adds the Video calling using H264 codec.
- The app works not only with other iPhone users but also with any video phone (device or software) which supports video codec H264.
- Bandwidth usage per call is only 140Kb/s with 15 frames per second.
- To download the app please press here (this version works with any SIP server supporting video H264)



Features - Address book

Native address book from mobile phone is fully integrated with the Vippie! Mobile. User can select a contact from the address book and make a call.

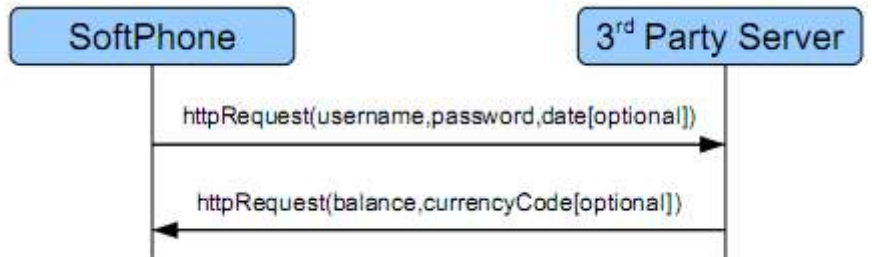


Features – balance

In the main window of Vippie! there is a balance shown all the time:



The process of getting balance from 3rd party server is shown in the diagram below:



The HTTP request can be done using POST or GET.

For VoipSwitch servers the same communication occurs through SIP call.

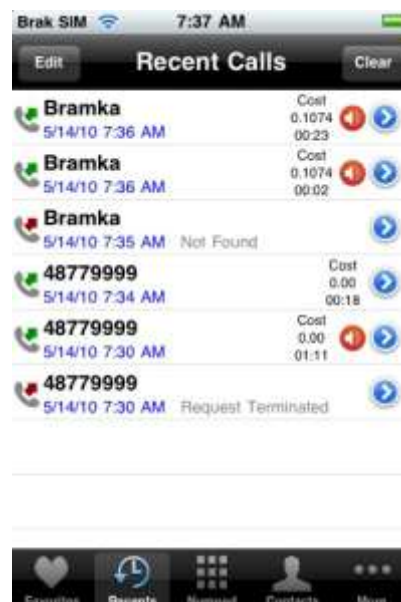
Above diagram shows how it works in general. Every client can chose whatever they want to be sent to their server as well as they can send us whatever they want.

Features – call history



Call history can be checked by clicking *Recents* button in main window:

This will show the list with all incoming and outgoing calls made by softphone



Features – Chat

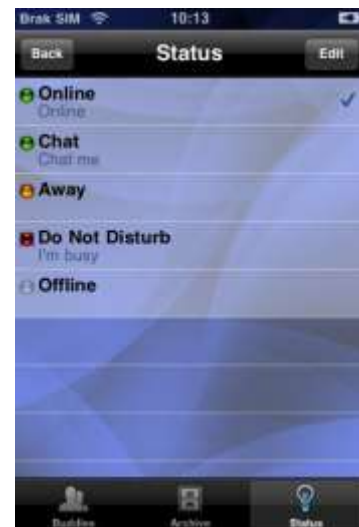


This feature allows user to chat with other through XMPP protocol.

The user can see the contact list and the conversation window looks very clearly:

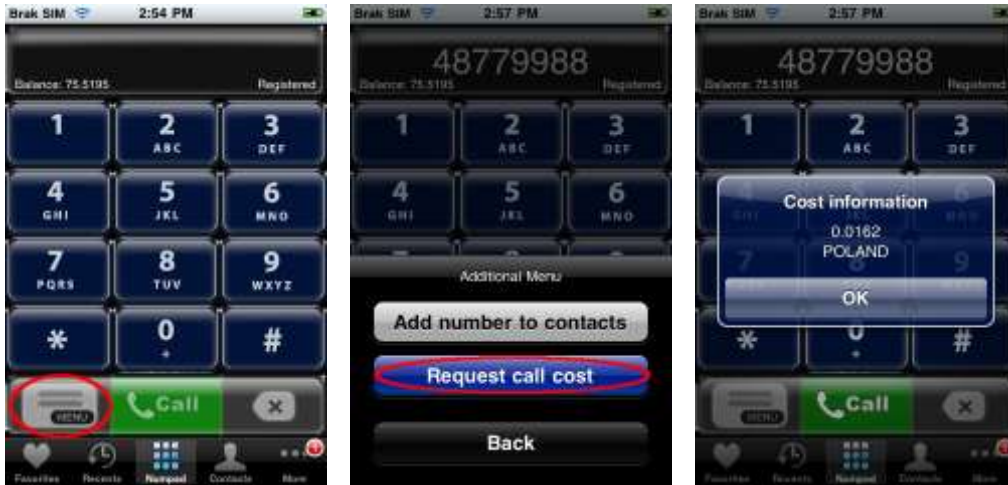


User's conversations are stored in the archive.
There is a possibility to change user's IM status:

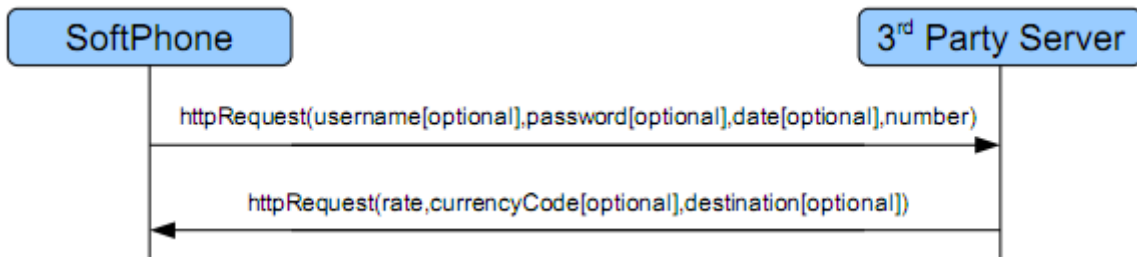


Features – Check rate

End user can check the rate of intended call (before making it) by pressing *Menu* button in main window after typing the number we want to call to:



The process of getting check rate from 3rd party server is shown in the diagram below:



The HTTP request can be done using POST or GET.

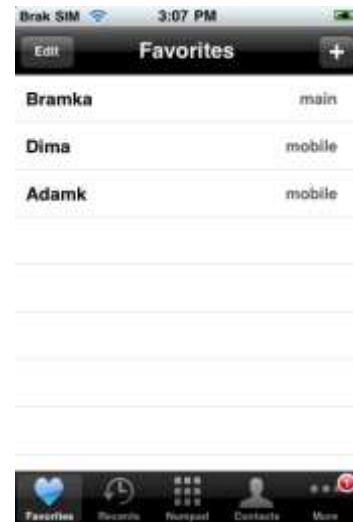
For VoipSwitch servers the same communication occurs through SIP call.

Above diagram shows how it works in general. Every client can chose whatever they want to be sent to their server as well as they can send us whatever they want.



Features - Favorites

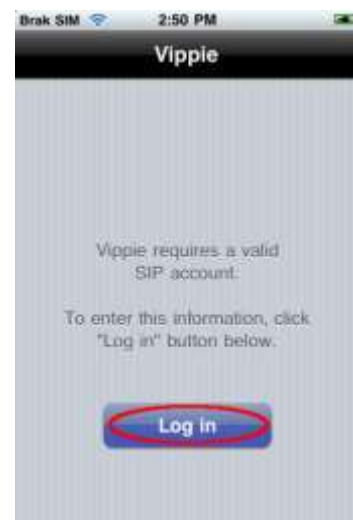
We can put particular contacts from our address book to the *Favorites* menu. We can reach this menu by clicking the *Favorites* button in main window. Here we can see the list of our favorite contacts:



Features - Log in

After launching softphone application from the iPhone menu, *Log in* screen will appear.

After pressing "Log In" button Client will be asked to give SIP login and password (those settings can be changed later form More->Settings menu):



Features – Loudspeaker

Speaker button in the call menu is used to put caller on the speaker during the calls.



Features – Record a call

To record a call one have to click on *record* option in the call menu.

Recorded calls are available under Recents menu item.



Features – Settings

Main softphone settings can be changed under *Settings* option available after pressing *More* button in the main softphone menu. In most cases there are only two parameters available – SIP Username and password.



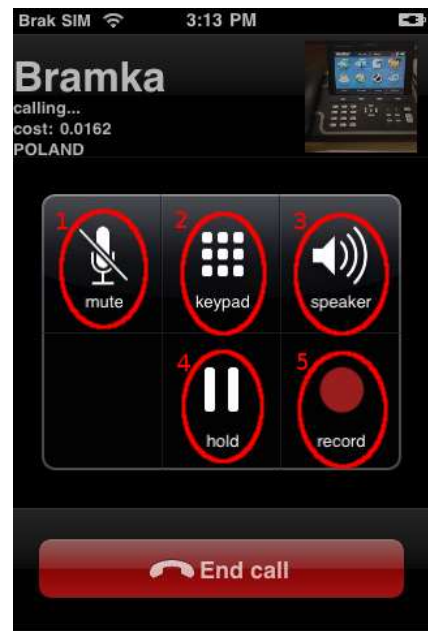
Features – SIP Calls

In order to make a call one have to type the number he or she want to call to in the main window and then press the *Call* button.

Options available during the call:

1. Mute the call.
2. Use keypad.
3. Put the caller on speaker.
4. Hold the call, to mute microphone only.
5. Record the call.

In order to end the call we press the *End call* button:



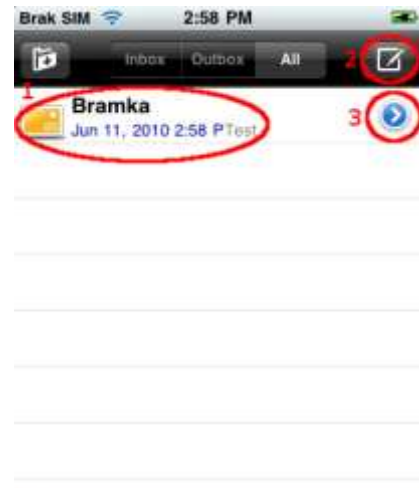
Features – SMS

Vippie! Allows for sending and receiving SMS messages.

In order to send SMS message from iPhone softphone client has to press *More* button on the main screen and select *Message Center* option!

Options available within *Message Center*:

1. See the list of sent/received messages (in order to see particular message white arrow button should be pressed).
2. Create new message.



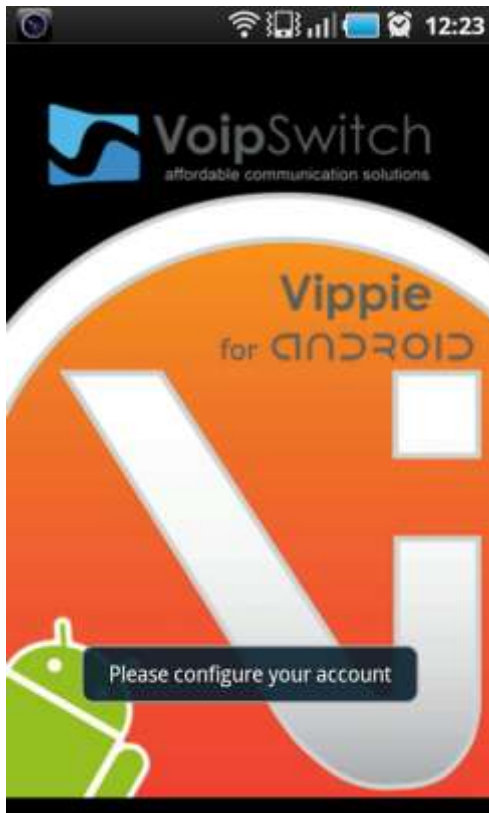
Features – Voicemail

Voicemail feature allows to listen recorded voicemail messages directly from the mobile softphone application.



Google Android mobile softphone

- Vippie for Android is a SIP softphone that works on mobile phones based on Android system.
- The softphone supports following Codecs: G729, G711, and GSM.
- The softphone can connect to Internet using WIFI, GPRS, EDGE or UMTS
- Vippie mobile, a white-label branded softphone, can work with VoipSwitch and also with 3rd party SIP servers.
- The softphone can be linked to an IP address of a VoipSwitch (or a sip server) or to DNS name for example sip.mymobilevoipcalls.com



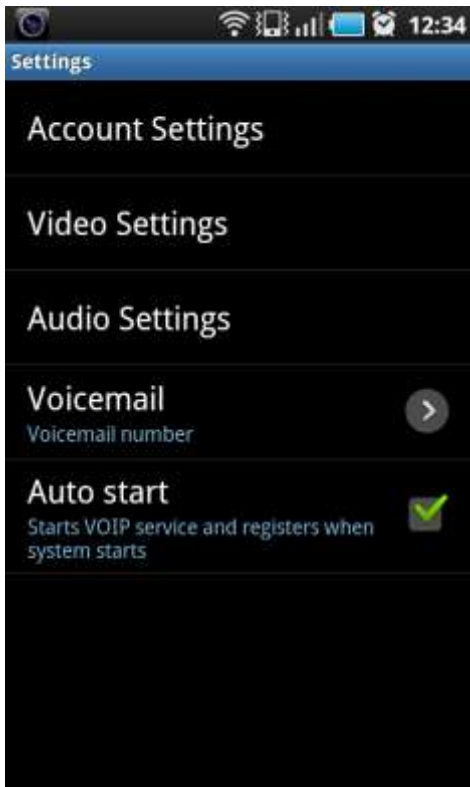
Main features:

- Making and receiving SIP call
- Video call (Using H264 and H263+ codecs)
- Built-in tunnel for passing through VoIP blockades*
- Contacts (phone book)
- Loudspeaker
- Balance information*
- Destination rate*
- Time, call status logs
- Last calls log
- Sending and receiving SMS over SIP protocol*
- Optionally built-in callback client for VoipSwitch (triggering conference with two numbers)*
- Multiple active calls support
- Conferencing up to 4 participants



- Blind and attended transfer
- Digits Interception (Dialer pops up once dialing from the phone's "Dial pad" or choosing a number from the phone's "Contact list")*

Instant messaging over SIP SIMPLE to be released in April 2011

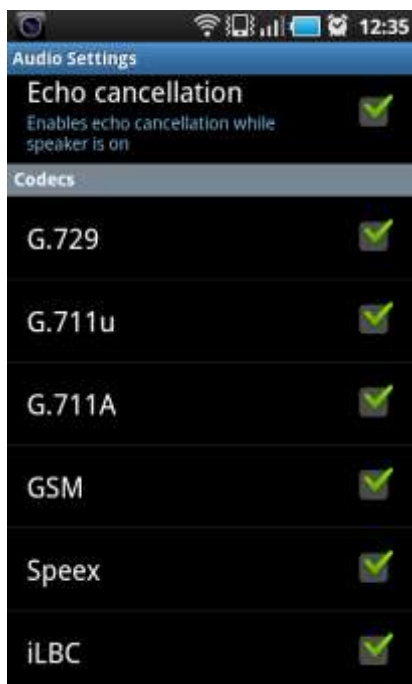


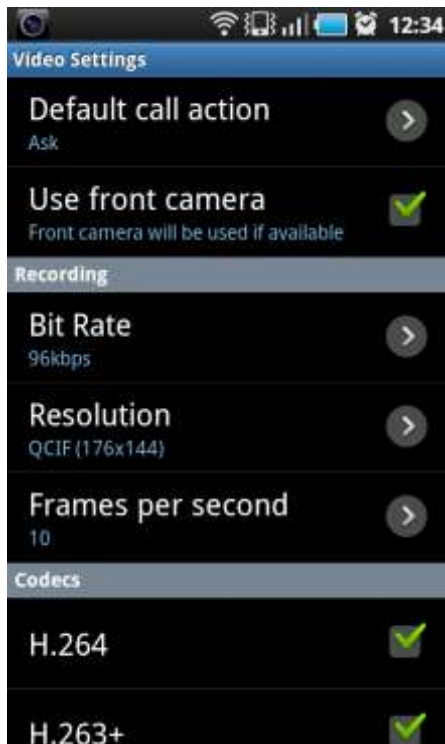
Main softphone settings allows to control basic functions like SIP account settings, Video and Audio calls settings, voicemail access type and let softphone start automatically after device boot.

Account settings are used to configure SIP Server, proxy and SIP account credentials used for registration.



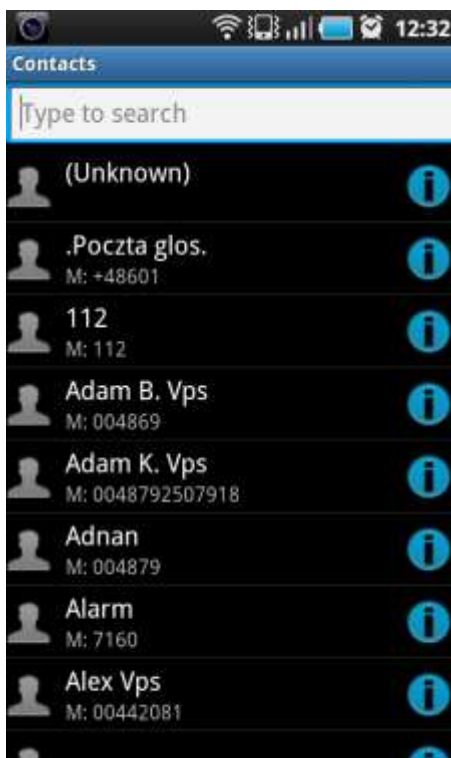
Codec and echo cancellation options are available under Audio Settings.





Video settings allows to change Bit Rate, number of Frames per second and Resolution.

In addition there is possibility to enable particular video codecs, select default camera and call type.



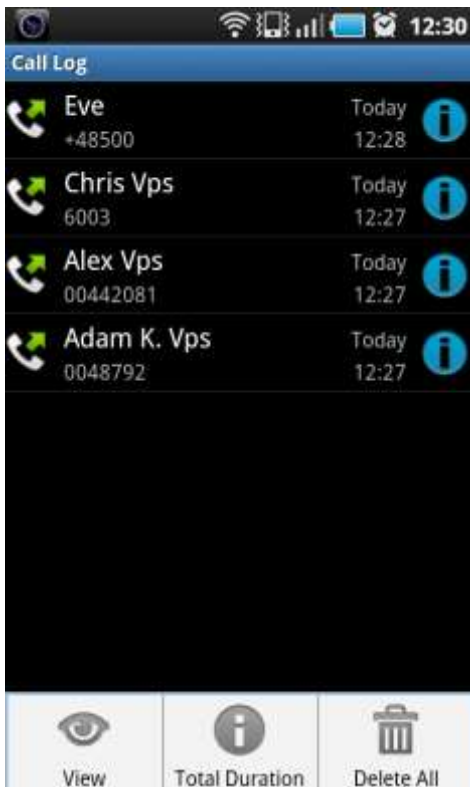
The native address book from mobile phone is fully integrated with the application. Users can select a contact from the address book and make a voice call, video call or send a message.



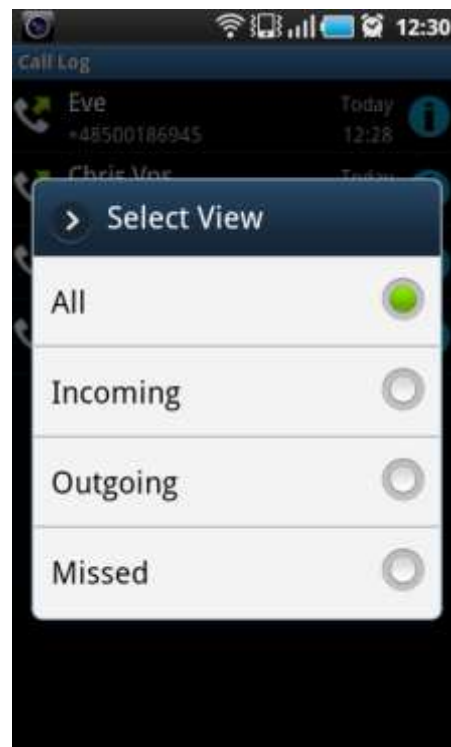


Users can select a contact from the address book and make a voice call, video call or send a message.

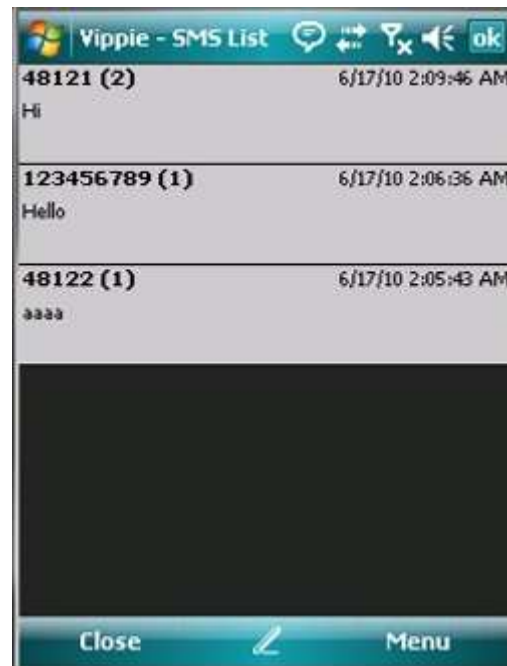
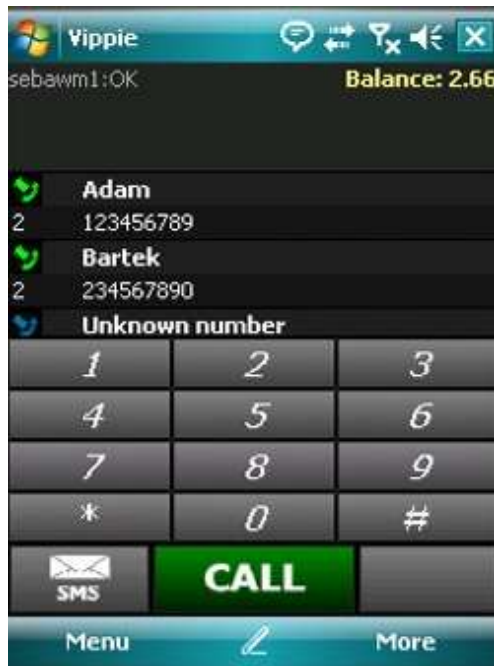
Clicking on any of the contacts will trigger a call as shown below:



To look into the call history we press the Calls Log button from the menu.



Windows mobile softphone



Main features:

- Making and receiving SIP calls
- Built-in tunnel for passing through VoIP blockades (optional)*
- Sending and receiving SMS*
- Support for touch screen
- Integrated contacts from the phone
- Redial
- Balance information*
- Destination, rate*
- Time, call status logs
- Last calls log
- Support for Codecs G729, GSM and G711
- Loudspeaker or GSM speaker
- Connectivity through WIFI, 3G, EDGE and GPRS
- Conference call (Up to three users)
- Digits Interception (Dialer pops up once dialing from the phone's "Dial pad" or choosing a number from the phone's "Contact list")*

Symbian s60, Symbian ^3 mobile softphone

- Vippie Mobile softphone for Symbian is a SIP software client for Symbian based mobile phones (for example Nokia). The most popular are various models of Nokia phones such as e61, e71, N97 and



- many others including Symbian ^3 Operating System.
- The softphone supports following Codecs: G729, G711, GSM, ARM
- Vippie Mobile, a white-label branded softphone, can work with VoipSwitch and also with 3rd party sip servers.
- The Softphone can be linked to an IP address of a VoipSwitch (or a sip server) or to DNS name for example sip.mymobilevoipcalls.com



Features:

- Connectivity is linked through either WIFI, 3G, EDGE or GPRS. The softphone asks the subscriber to select the preferred method from the list of available (defined on the phone) internet access points. The window with the list of access methods is shown during the softphone start up.
- Making and receiving SIP calls
- Making and receiving SIP calls from behind any VoIP blockades/firewalls.*
- The native address book from the mobile phone is fully integrated with the Vippie Mobile softphone. User can select a contact from the address book and make a call.
- Redial button
- Call status
- Last calls log
- Summary window showing last call cost and duration*
- Balance information*
- Loudspeaker
- Audio control
- Sending and receiving SMS (over SIP)*
- Instant messaging over XMPP, chat and presence*
- "Call thru" and "Callback" functionality*
- Digits Interception (Dialer pops up once dialing from the phone's "Dial pad" or choosing a number from the phone's "Contact list")



License:

License is per one IP address or DNS name.
 The softphone can be placed on provider's server so all end-users can download it from his website for free.

Certificate:

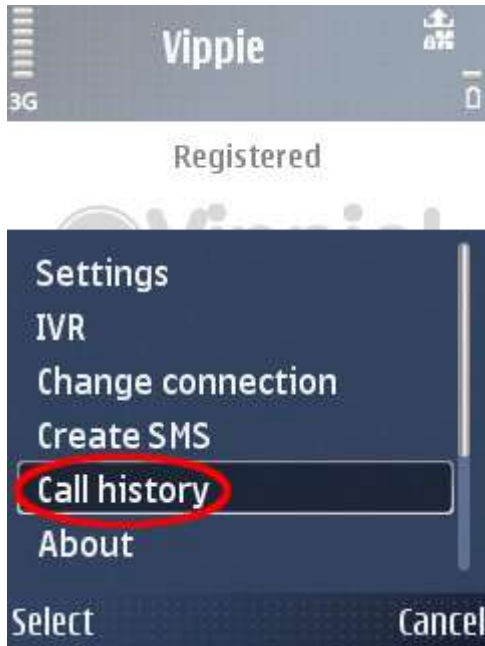
Each softphone is digitally signed and certified by Symbian/Nokia consortium. The certificate is required per each copy, for example if a provider changes IP address then the Vippie installation file will have to be certified again. Therefore recommended is to use DNS names which remain the same even when the IP of server is changed.

Obtaining the certificate is paid. For first time it is included in the price of the dialer.

Features - Symbian softphone

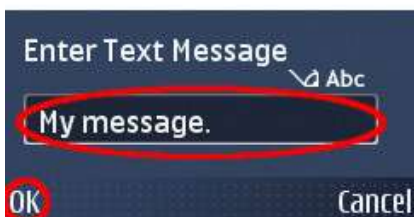
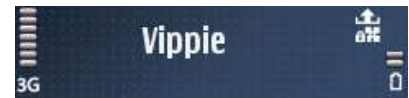
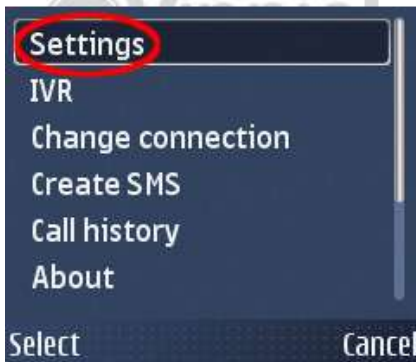
Symbian softphone features are similar to other applications (Windows Mobile, Google Android, iPhone) so VoipSwitch software vendor will just put a gallery below for your review.







The IVR is direct connection through SIP to number predefined by provider, for example support or sales.



48123456523 (circled in red)

Login: 11223388
Balance: 60.45



BlackBerry mobile softphone

Vippie Mobile for BlackBerry is a SIP softphone client that works on BlackBerry GSM handsets with OS >4.6, OS 5 and OS 6.

- Support for G711u, G711a and GSM codecs.
- Support for VoIP tunnel technology* which works from blocked areas or from behind firewalls for both incoming and outgoing calls.
- Connectivity over WIFI, EDGE or UMTS.
- Vippie, a white-label branded softphone, can work with VoipSwitch and also with a 3rd party SIP servers.
- The softphone can be linked to an IP address of a VoipSwitch (or a sip server) or to DNS name for example sip.mymobilevoipcalls.com



BlackBerry Softphone main features:

- Making and receiving SIP calls
- Contacts (Integrated address book with "search" option)
- Loudspeaker
- Balance information*
- Destination, rate*
- Time, call status logs
- Last calls log
- Redial
- Digits Interception (Dialer pops up once dialing from the phone's "Dial pad" or choosing a number from the phone's "Contact list")
- *Instant messaging over SIP SIMPLE to be released in April 2011*



Features - BlackBerry softphone

BlackBerry softphone features are similar to other applications (Windows Mobile, Google Android, iPhone) so VoipSwitch software vendor will just put a gallery below for your review.



PC softphone

Vippie is a multifunctional communicator enabling voice over IP, SMS over IP and instant messaging.

PC softphone will be branded with Customer logo, name and icon.

In addition we offer Vippie as a stand-alone application to work with 3rd party VoIP systems (per ex. Asterisk, OpenSER and others)



The main characteristics:

- Based on SIP protocol
- Call conference up to 8 users
- Phone book stored on server side (Or locally)
- Speed dial (Shortcuts associated with phone book entries)
- Easy access to last dialed numbers
- Real-time status messages
- Actual balance information
- Actual rate and call maximum duration for the dialed number
- Information on the maximum duration for the call
- Connection timer
- Information on the last call cost
- Voicemail with messages stored on the server, detailed information on left messages, one click access to selected voice message
- Waiting Message Indicator support



- Sending SMS functionality (through SIP info, further it can be converted to SMS protocols supported by VoipSwitch and transferred to SMS providers)
- Hold conversation function switching between connected lines
- Supported speech Codecs G729, G723.1, GSM, G711
- Instant Messaging functionality (XMPP/Jabber protocol)
- Support for various makes of USB phones, complete integration with **Yealink** USB phone models, **Atcom** and other manufacturers
- Support for Windows 2000, XP, 2003, Vista, 2008 and Windows 7
- Customizable design
- Call transfer: Blind and Attended
- *Instant messaging over SIP SIMPLE to be released in April 2011*



Comparison table

Feature name	Black Berry	Google Android	iPhone	Symbian	Windows Mobile	PC softphone
Making SIP calls	yes	yes	yes	yes	yes	yes
Receiving SIP Calls	yes	yes	yes	yes	yes	yes
VoipTunnel support	yes	yes	yes	yes	yes	yes
Connection - WiFi	yes	yes	yes	yes	yes	n/a
Connection - 3G	yes	yes	yes	yes	yes	n/a
Connection - EDGE	yes	yes	yes	yes	yes	n/a
Connection - GPRS	no	no	no	no	no	n/a
Call-through	yes	yes	yes	yes	yes	no
Callback	yes	yes	yes	yes	yes	no
SMS incoming	yes	yes	yes	yes	yes	yes
SMS outgoing	yes	yes	yes	yes	yes	yes
Work in background	yes	yes	yes ¹	yes	yes	yes
Address book (VoipSwitch)	no	no	no	no	no	yes
Address book (native/local)	yes	yes	yes	yes	yes	yes
Voicemail (VoipSwitch MWI)	no	no	yes	no	no	yes
Call history	yes	yes	yes	yes	yes	yes
Balance display	yes	yes	yes	yes	yes	yes
Check rate	no	yes	yes	yes	yes	yes
Loudspeaker	yes	yes	yes	yes	yes	n/a
Call recording	no	no	yes	no	no	yes
Call transfer (blind)	yes	yes	no	no	no	yes
Call transfer (attended)	no	yes	no	no	no	yes
Call hold	yes	yes	yes	yes	no	yes
Conference calls	no	yes	no	no	yes	yes
DTMF via RFC2833	yes	yes	yes	yes	yes	yes
Echo cancellation	yes	yes	yes	yes	no	no
Instant Messenger (XMPP)	no	no	yes	yes	no	yes
Instant Messenger (SIP SIMPLE)	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>	yes
Presence integrated with contacts	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>	<i>April 2011</i>
Voice codec - G729	no	yes	yes	yes	yes	yes
Voice codec - G711u	yes	yes	yes	yes	yes	yes
Voice codec - G711a	yes	yes	yes	yes	yes	yes
Voice codec - GSM	yes	yes	yes	yes	yes	yes



Voice codec - G722	no	no	yes	no	no	yes
Voice codec - Speex	no	yes	yes	yes	no	yes
Voice codec - iLBC	no	yes	yes	yes	no	yes
Voice codec - AMR	yes	yes	yes	yes	yes	yes
Video codec - H.263	no	yes	yes	no	no	no
Video codec - H.263+	no	yes	yes	no	no	no
Video codec - H.264	no	yes	yes	no	no	yes
Video framerate	n/a	15FPS (TIFF, QCIF) 10FPS (VGA)	15FPS (TIFF, QCIF) 10FPS (VGA)	n/a	n/a	n/a
Digits Interception	Yes	Yes	Yes	Yes	Yes	n/a
Branding - name	Yes	Yes	Yes	Yes	Yes	yes
Branding - icon	Yes	Yes	Yes	Yes	Yes	yes
Branding - splash screen	Yes	Yes	Yes	Yes	Yes	yes
Branding - background	Yes	Yes	Yes	Yes	Yes	yes
Publishing options	web / BlackBerry World	Web / Android market	AppStore	Web	Web	Web

¹ Two modes supported: SIP over TCP and Keep Awake for UDP

