

**The services of the portable software can be used directly, without installation in a USB Flash drive or a memory card of a digital voice recorder, except for the services highlighted in grey, which can be used only after installation from an USB flash drive (or CD). With this USB flash drive version the voice recording software can be run at any time on any other computer. If any special external devices are required, they can be used immediately after being connected.**

### **About the application and major functions of the ABSONIC v2 voice recording and management system**

***Without voice recording there is no proper information management, competitiveness and information security!***

The processes of everyday life are based on information and generate information. A major part of the daily information flow is voice or speech originating from personal conversations (meetings, presentations, etc.) on one hand, and via telecommunication devices (telephone, cellular phone, two-way radio, etc.) requiring no personal presence on the other hand.

The demand of recording and storing audio information for latter processing or archiving may arise at companies, in the public service sector, state institutions, small enterprises and for individuals, so practically everywhere. Recording, storing, processing information has a significant role in competitiveness, cost reduction, increasing revenues, and also in supporting the activities of state administration and the authorities. Time, energy and money can be saved, security and interests protection can be enhanced as well. Some fields of application of our voice recording and processing system for stand-alone computers (for private or multi-user purposes) and for network use (where the information stored on a server is available with appropriate management and control for all those involved):

- activities of managers, secretaries, administrators, time and work management, dictation (making records of meetings)
- manually controlled or automatic recording of meetings, talks, presentations by microphone
- manually controlled or automatic recording of phone, cellular phone and two-way radio conversations
- pre-programmed (date and time) automatic recording of microphones and telephones
- messages for colleagues or other individuals
- hearings, phone calls of public interest (police, court, local governments, round-the-clock duties, customer services, complaint handling services, emergency calls, etc.)
- processing of voice recording by voice recognition where live speech or the already saved speech recording may be automatically written down in characters
- automated customer information system (Interactive Voice Response system - IVR) – automated telephone customer information service
- automated dialling system for carrying out the programmed and automatic daily calls based on a freely configured list.

The ABSONIC v2 system, by the secondary use of existing computers, turns the computers into a virtual voice recorder with wide range of functionalities.

**Requirements for running ABSONIC system**

<b>Minimum IT requirements of ABSONIC system</b>					
<b>Operation system</b>	<b>Processor</b>	<b>RAM</b>	<b>Data storage</b>	<b>Resolution</b>	<b>Hardware key</b>
<b>Windows 2008 / 7</b>	2GHz processor	4GB	For installation: 50 MB. For recording: ~20MB/hour	1024 x 768	USB port
<b>Windows 8 / 10</b>	2 core 2,5GHz processor	4GB	For installation: 50 MB. For recording: ~20MB/hour	1024 x 768	USB port
<b>Minimum requirements of ABSONIC speech recognition system</b>					
<b>Windows 2008 / 7 / 8 / 10</b>	4 core 2,5GHz processor	8GB	For installation: 50 MB. For recording: ~20MB/hour	1024 x 768	USB port

- A multifunctional hardware key is required for running the ABSONIC software, which we provide in two different versions:
  - PENDRIVE with three functions: firstly, a hardware key, secondly the storage device for the ABSONIC programs and the documents required for operation, thirdly it has storage capacity for records from a hundred to a thousand hours depending on the capacity of the PENDRIVE.
  - Higher category digital voice recorder with four functions: firstly a hardware key, secondly the storage device for the ABSONIC programs and the documents required for operation, thirdly it has storage capacity for records from a hundred to a thousand hours (depending on the capacity of the PENDRIVE), fourthly it can also be used as a portable device for producing records suitable for speech recognition either independently without a computer or connected to one and working with it synergistically in many different ways.

**Appearance and user interface**

- user-friendly, system-oriented, transparent structure of menus, easily understandable icons for unambiguous use supported by context-sensitive HELP and Users' Manual,
- supported languages in menus and commands are Hungarian and English, and on demand French, German, Italian, Spanish, Portuguese, Russian, Slovak, all directly selectable and may be switched at any time during the use of the program without shutting down and restarting the application.
- Server application: makes the program suitable to be run on a server as a service application.

**Major recordable audio sources**

- Wired or wireless (RF) microphone(s) suitable for the recording environment and purpose (sensitivity), for meetings, conferences, presentations, dictation.
- Existing or to be installed networks of microphones: one- or multi-channel recording of microphone networks or sound amplifier systems in meeting rooms, conference halls.
- Analogue trunk telephone lines and extensions of exchanges.
- ISDN2 telephone main lines and ISDN extensions of sub-exchanges (digital telephone lines)
- IP telephone lines VoIP (SIP): conversations via online channels can be recorded, the recording of the conversations is done completely through the software requiring no (phone) adapter.

- Most of the cell phones with a variety of technical solutions: software, headset, GSM terminal adapters.
- Voice recording of Bluetooth mobile phones by using the data traffic of the type of wireless headset recommended and delivered by us: by establishing a Bluetooth connection between mobile phones and the computer, the recording of mobile phone conversations is possible regardless of the type and capabilities of the phone. Besides the one recommended by us, you may use any kind of USB headset (wired or wireless).
- Conversations on SKYPE can also be recorded. Its advantage is that it requires no adapter since recording is done through the software.
- Other analogue or digital audio sources connected to computer's audio card or ABSONIC v2 adapters (CD, DVD, MP3 player, analogue or digital voice recorder, USB-flash drive, TV, radio receiver, tape recorder, etc.).
- Fast transfer of audio files with portable digital recorders by digital upload through USB port.
- Two-way radio sets: property protection companies, ambulance, fire brigades, law enforcement agencies, etc.
- The voice channels of monitoring and security cameras can be recorded as well.
- Recording is possible from audio frequency interfaces of a variety of phone sets, telecommunication lines and/or telecommunication channels (handsets, headsets, etc.)

### ***One or multi-channel simultaneous recording from microphones and/or telecommunication channels***

- The basic configuration of the ABSONIC v2 PC-based voice recording system makes recording possible on one channel at a time.
- Using standard internal sound cards installed in the computer maximum 32 audio channels can be recorded simultaneously. In case there is no internal audio card in the computer or it cannot be installed, e.g. the computer cannot be disassembled only 1-2 channels can be managed via the external audio card.
- Using our telecommunication adapters with USB or UTP interfaces requiring no sound card, only the computer's resources set limit to the number of simultaneously recorded channels, which in case of the optimal computer configuration can be up to 128 channels. The number of channels can be extended in 4 or 8 channel increments, and with a lower number of channels by two channels.
- Simultaneously recording 1-8 ISDN2 main and/or extension lines
- Recording VoIP (SIP) communications from the traffic of VoIP (SIP) network gateway cards. Each card can record maximum 32 channels. Since a computer may have a number of network cards, therefore the number of simultaneously recorded channels can be increased.
- SKYPE-channel recording can be achieved on a single channel only on the computer running SKYPE.
- Recording communications on mobile phones with Bluetooth using a USB headset can be done on one computer only on one channel at a time.

### ***General recording and management functions***

- The user can pre-adjust the quality of recording to the requirements both in mono- and stereo modes
- Manual recording started and stopped by the user using icons (the recorder controlling functions are marked on the monitor with international standard pictograms, icons)
- Automatic starting and stopping of recording by the beginning and the end of (microphone or telephone) communications (e.g. picking up and hanging up the handset) or started/stopped by audio signal or pre-programmed timing of start/stop like with video recorder
- The basic functions of recording triggered by pushing a button on the phone or cellular phone, controlled by detected DTMF codes (start, stop and pause recording)
- The recording can be followed and monitored in real time by listening or joint listening
- Detecting and recording the dialling and the dialled number in communications on analogue, ISDN2, VoIP (SIP) and Skype lines.
- Replaying a pre-configured warning note (the function can be toggled on and off) to the listener on the fact of recording after establishing telecommunication link (informing the caller that the conversation will be recorded). The function can be turned on or off depending on the user rights

granted. This is useful where special care is taken to make sure that the caller is aware of the fact in advance that voice recording is to take place.

- Individual internal phone book: list of addresses/contact data can be produced in advance or linked to the calls to be made. Names and addresses can be assigned to the phone numbers of the calling and the called parties, the lists can be managed in a database which can handle data imported from other electronic telephone databases
- In order to facilitate the identification of calling and called parties the names, the number of the called, and later the calling parties can be assigned to the recording.
- During recording the computer generally can be used for other, non-multimedia applications but this depends on the number of concurrent recordings. This might also be limited the number of channels of simultaneous recordings.

### ***Options for remote control and remote management***

- The ABSONIC v2 system can be controlled by external devices, the functions will depend on the controlling device so the (basic) functions can be operated from a distance from the computer.
- The USB connected foot pedal controls play to supports the two handed writing the minutes of a meeting from the recording.
- The GAMEPAD provides a simple, flat remote control with a few buttons.
- Remote access/control through the network is also available (TCP/IP). It is also possible to control/manage the recording software from another computer so there is no need for on the spot personal presence during recording and/or when processing the recordings.
- Using PC ANYWHERE or TeamViewer software, facility all functions of the software can be controlled via suitable telecommunication or internet connection/channels (landline phone, radio phone, walkie-talkie, online or satellite connection) from another building or settlement or even from abroad. When using those two software the recording saved on the remote computer cannot be listened to on-line directly from the remote controlling/managing computer only after remote copying of the audio files to the computer in reach.
- Using portable IR remote controller, the basic software functions can be remote controlled within a line-of-sight distance of 5-10 meters.
- The basic functions of the software can be controlled via a Bluetooth remote control device up to 10 meters and there is no need to be in line-of-sight. The software can also be controlled via suitable cellular phones.
- The special, professional wired voice recorder remote control with USB interface can be very useful when dictating in an office, at police questionings, at hearings, especially because there is no need to access any other computer peripherals except for the monitor being in sight.
- The recording of each channel can be triggered by a galvanic isolated switching signal (e.g. microphone switches, penetration detectors, alarms, motion detectors, portable wireless remote controllers, panic button etc.).
- If the computer's internal clock running the software is not accurate enough it can be synchronized with external radio signal to the accuracy of an atomic clock. The timing of the recording can be as accurate as possible enhancing the authenticity of the recording. Special external hardware module is necessary for this feature.

### ***Processing and management functions of records***

- A virtual and hierarchic tape- and folder structure can be created and named for the transparent management of recordings.
- The virtual tapes and the recordings stored on these tapes can be re-named, deleted and moved to any desired driver, partition or network drive of the computer that can be used as storage device.
- Data stored with and/or assignable to the recordings: date, time, title, operator, short comment (e.g. place and/or name of the recording, etc.) time marker (flag) texts, document created from the recording, called number (called person's name), calling number (calling person's name), duration of the communication and elapsed time between the first ringing and receiving call.
- Minutes, memorandums, task distribution lists can be generated from the recordings and attached to them by using a foot pedal control and two hand typing. This way the combined value of the minutes and the voice recording as evidence increases.
- The playing speed is variable: replay speed is can be slowed down and sped up to make it more perspicuous, or for faster search.

- Full text search is available for any data of the recording (title, date, operator, short summary, names of indices, text of the minutes assigned to the recording, etc.).
- Automatic or Safety back-up, automatic and manual archiving function on desired storage device for the long term saving of the recordings.
- Recordings can be played onto or copied to other media (and vice versa). The transfer list can be created to DVD, CD, USB flash drive, normal or microcassette, digital voice recorder, hard disk, MP3 player, etc. The purpose of this function is to facilitate listening to, evaluating and processing one or more recordings in other locations under different conditions.
- The selected record lists can be edited according to need and the ABSONIC v2 recordings can be written to CD, DVD, Blu-ray discs without a separate writing software.
- The digital voice format of the ABSONIC v2 system is unique with special file compression. The file name extension is AB2. Thus files are small in size and depending on the rights granted cannot be modified. MP3 and WAV file format is also available to allow playing back on generally used players. The recordings made in AB2 format can be converted to other formats and back (subject to authorization), and to other file formats supported by the codecs installed on the computer (e.g. OGG, WMA, MPEG4, PCM, AAC, etc.)
- Records can be attached to e-mails. These can also be transmitted automatically (besides usual manual sending) to a specified e-mail address, thus the addressee is informed of every important communication. Upon completion of recording the software sends it to a given e-mail address immediately. Switching the service on and off is subject to authentication.
- Records also can be uploaded to FTP server so that these are made available to the concerned party at any part of the World. This function runs automatically so that upon the completion of recording the software sends it to an FTP server immediately. Switching the service on and off is subject to authentication.
- Recordings can be forwarded via e-mail manually and at the same time our small, simple player software not requiring installation may also be sent or downloaded from our homepage. Recordings transferred through Internet can thus be simply and easily played anywhere. Some mailing systems may filter out this software so downloading from our homepage is recommended.
- The captured vice recordings can be automatically played onto a pre-set telecommunication or computing device that has its own connection number (e.g. telephone or computer). The switching on and off of this service is subject to rights granted.
- The remote query and playing of voice recordings and messages is also possible through a telephone line: depending on the rights granted, the authenticated users may search for and play voice recordings from anywhere in the world through a telephone line using the DTMF signals of the keyboards on phones and mobiles.

### ***Common and special voice recorder functions***

- Mono or stereo recording with START-STOP-PAUSE-FAST FORWARD and REWIND functions marked with well-known pictograms, icons.
- Recording in overwrite mode to overwrite existing recording from a selected position.
- Recording in insert mode to insert new recording into an existing one from a selected position.
- Selected individual recordings can be linked in any sequence in order to have them in one file for any reason, e.g. storing, forwarding, managing, playing, etc.
- Time markers (flags) are available before, during and after recording, which means any selected parts, sections can be marked, named, e.g. in case of a meeting with several issues on agenda and with several speakers. With the help of this feature the selected parts of the minutes can be assigned to the related parts of the recording so in case of a long recording it is easy to quickly find the required part of the recording.
- Mutual exchange of audio files with portable digital recorders (digital upload through USB port).

### ***Answering machine functions***

- Traditional phone answering machine functions with various different greetings and texts that can be preconfigured and with adjustable recording length.
- Internal messaging and message forwarding system is easy to set up on a stand-alone computer or to computers within a network (e.g. office network).

### **Automated customer service information system (Interactive Voice Response system-IVR)**

- This technology allows clients contacting you on the phone to automatically receive information or guidance from a computer by using the keyboard of the caller's phone or mobile (navigating with DTMF signals) and thus moving through an offered menu structure. This function is useful in institutions and companies where there is customer service providing support.

### **Automated telephone calling system**

- By using this service, a manager, colleague or a private individual may plan, programme and automatically carry out his daily phone calls. The scheduled calls may be programmed for a specific time, in categories of priority and in a fixed order as well. The system automatically dials the number based on a pre-set list, waits for the answer of the person called (plays a message to the person if so programmed) then connects the caller. The company and/or person to be called, the exact date and time of the call may be selected from a previously created, internal directory. With the help of this system daily phone calls can be organized and carried out efficiently and in a time saving manner.

### **Security functions**

- Hardware key, which can be a Flash drive and can also be a special digital voice recorder as well, protects the ABSONIC v2 software against illegal access, copying and software license and option data.
- Multi-user configuration option is available in case the software is used by several users. The access authorization can be set for individual users, e.g. recording and playing functions can be configured for each user as well as deletion and editing rights. Password for authentication can be changed in periods as chosen.
- Simultaneous recording on two hard disks to enhance the safety of recording.
- Protection of recordings is provided by unique verification codes to facilitate authenticity and genuineness.
- Full range log (to facilitate tracking every activity of the users during their use of ABSONIC v2, including automated alarms). Encrypted log files are protected against unauthorized deletion and modification.
- Protection against sabotage and users tampering with the contents of the system. Configuration data- and log file are protected by encryption. Further, ABSONIC v2 regularly checks the continuous presence of USB and UTP telecommunication interfaces.
- A variety of alarms can be set for reaching the adjustable lower capacity level of storage device or partition (e.g. the available disk capacity decreases to 10%). Selectable alarm for the idling system (e.g. a considerable time of shut-down for technical or other reasons). Timed alarm (the system passes alarm signal at the time set by the user). Optional alarm in case of power supply failure and return (suitable uninterrupted power supply is required). The system can send e-mail messages about the alarms depends on the settings.
- Having the computer and the operation system configured properly the recording system automatically re-boots and restarts according to the former set-ups following proper preliminary computer and software set up.

### **Other special functions**

- Call answering time: customer services may need to measure time elapsed between incoming call signal and answer by on-duty person. The National Media and Infocommunications Authority may also have requirements in this respect.
- Statistics: this functionality prepares statistics and registers of records in accordance with particular needs.
- Analogue USB connected adapter access via network: there is the possibility not to record the voice recordings on site but to forward the command and voice data to an ABSONIC v2 software running on a remote computer through a TCP/IPv4 network.
- Central update manager system: in case of active Internet link-up the ABSONIC v2 is capable to check automatically if the software is the latest version and give notice to users on the availability of new versions.

- Phone-line traffic (telephone set) recording from connector socket of the telephone handset: voice on telecommunications equipment can be recorded by means of branching the handset connections.
- **ABSONIC v2 DLL and SDK:** These solutions allow software developers to integrate the services of ABSONIC v2 into their own software. This way the services offered by ABSONIC v2 can be called, activated and controlled from other softwares.
- Strong encryption: voice recordings and the related contents encrypted with TwoFish + salting, key fingerprints SHA-512 + salting, key storage encrypted with TwoFish + salting. The encryption keys can be regenerated on other computers as well, in possession of the proper data. It is recommended to place the configuration, adjustment, modification and verification of privacy protection and authorization into the care of the security department (organizational unit) in the organization or company, independently from the IT department.
- **Automatic Gain Control (AGC):** the recording level can be adjusted automatically in relation to the level set on the Recording Level slider to improve the audibility of speech.
- **Adaptive noise reduction:** the noise reduction level can be set before the start of recording in order to reduce the various noises during recording to improve the audibility of speech. In case of sudden impulse noise, the effectivity of the noise reduction is significantly weaker compared to static or slowly changing noise because some time is required for the adaptation of the noise reduction system.

### **Audio monitoring of computers connected in networks for safeguarding and information security purposes**

- Institutions, companies and individuals alike might have a need to check their computer workstations for reasons of safeguarding purposes, including information security, especially outside working hours. This technological solution allows, from a selected computer of a network, the voice recording of the environment of servers and/or work stations equipped with microphones and, if needed, with sound cards at any programmed date or time in such a way that this process cannot be seen or otherwise perceived in the environment of the computers. By this function some of the misfeasance outside working hours may be prevented, especially illegal or unauthorized activities near the computers. The legal, organizational and environmental conditions for the use of this function must be prepared and provided by the user. This function offers the possibility to remotely control a voice recording channel on the same local network (LAN, WiFi) from a desk top, lap top computer or even a tablet (e.g. smart phone with Android operation system).

### **Processing the voice recordings speech recognition (speech to text)**

- The processing of spoken information is supported by speech recognition (currently available in Hungarian), in which live speech or the already recorded and saved material is directly converted into text of characters, gets electronically and automatically written down. In case of proper technical preparations, the accuracy of the script, depending on the quality of the microphone, can be taken even above 90-95 %. The efficiency of speech recognition in conversations on telecommunication devices is worse (40-90% depending on the telecommunication channel) but this can also be improved after proper technical preparation (noise filtering, equalization, echo exemption etc.). The use of the speech recognition function pays off in places where the manual writing down of the voice recording is otherwise not required but is good to have a script. Or also in places where there is no person capable of touch typing. In case a memo or minutes are prepared from the audio material, the workload of writing down the record can be reduced by 66% on average.
- The central element of the speech recognition software is a general purpose, speaker independent speech recognition system that recognizes and converts into text continuous speech in a given language.
- We provide speech recognition using various solutions:
  - On one hand, using speech recognition subscription services (costing approx. 0.024 USD / minute and payable by credit card - (tariff on 10<sup>th</sup> July of 2017) of GOOGLE and NUANCE (together more than 100 languages or dialects) that are available online but in this case the speech/recording and its script can be protected only in to a limited degree against unauthorized access.

- On the other hand, using our own, offline, more sophisticated and efficient ABSONIC speech recognition software (in Hungarian) that can be run on the customer's own computer or on a company server using LAN-WAN access. In this latter case the speech/recording and its script can be fully protected against unauthorized access.
- Other elements of the ABSONIC speech recognition software allow voice recognition to be specialized to the typical lexical characteristics, technical jargon and common stereotypes used in the technical language of a given field (legal language, medical terminology, architectural terminology etc.) with the help of speech and text training modules that can be used by the customers.
- If required, it is possible to build a speech-adaption component into the ABSONIC system relating to one or more specific individual(s). This can reduce the error percentage of speech recognition.
- The introduction of speech recognition over 90-95% requires voice samples (speech corpus) and a significant amount of text material (text corpus) in order to take into account, besides the general vocabulary, the special terminology of the specific field. This process might take a few weeks or months.
- Some of our applications using a speech recognition system that can be used with GOOGLE, ABSONIC at different levels:
  - **DICSTATION – Writing down dictation with correct punctuation, storing the speech recording and the dictated script:**
    - Dictation system: voice-controlled, manual, keyboard-based writing with little or no use of the hand. Significant (administrative) savings in time, energy and money are possible, with an emphasis on assisting the handicapped and the hearing impaired. Keyboard control is understood to include the main functions of computer control.
    - Speech information processing is assisted by speech recognition, in the course of which the dictated spoken content is converted into a character text, it is electronically and automatically transcribed. The recognized text needs to be checked and corrected during dictation. Inserting punctuation, changing between lower case and capital letters, corrections etc. are done via voice control. In case of proper technical preparations, the accuracy of speech recognition can be taken above 90-95 % depending on the acoustic environment and the person dictating. The voice record of the dictation can be matched, stored, forwarded and processed with the script.
    - Real time or stored speech recognition can be done in a prescription based online mode (GOOGLE registration approx. 0,016 EUR/minute ~ 1 EUR/hour ~ 100 EUR/100 hours ~ 1000EUR / 1000 hours) without the recognition of punctuation marks but in this case the text is not recommended to contain sensitive information as speech recognition takes place abroad. Speech recognition can also be done with the recognition of punctuation marks using offline ABSONIC speech recognition (on local private-company/institution computers or on private-company/institution but central servers), in Hungarian when the text contains sensitive information, in which case security is provided by the user's own computer.
  - **MEETINGSTATION – Writing down discussions, meetings after recording (minutes, memos etc.) that may require manual corrections:**
    - Speech information processing is assisted by speech recognition during which the conversation can be displayed in characters in real time and the already recorded and stored audio material can be converted directly into written text, so it is electronically and automatically transcribed also with the identification of the speakers, if required. There is no punctuation yet. Depending on the speakers, the noises and disturbances of the environment, there might be character errors. In case of solid technical preparations, the accuracy of the script can be above 90-95 % using the training modules and depending on the quality of the acoustic system and the environment, the speech samples of the speakers and the (technical) text library. The voice recording of the session can be matched, stored, forwarded and processed with the script.
    - Punctuation marks, lower case and capital letters, mistakes need to be corrected manually because the speech recognition software cannot place the lower case and capital letters in case of a dictation type, free text speech. In those areas of application where the manual transcription of audio recordings is not otherwise required but it is still



useful to have a transcript – even with a few mistakes – or where there are no people with typing skills, there is no manual post production work to be done involving the correction of the transcripts of audio records. In case a memo or minutes are produced from the audio material, the manual correction work to be done by the person making the transcript can be reduced by two thirds on average using the speech recognition software.

- Real time or stored speech recognition can be done in a prescription based online mode (GOOGLE registration approx. 0,016 EUR/minute ~ 1 EUR/hour ~ 100 EUR/100 hours ~ 1000EUR / 1000 hours) without the recognition of punctuation marks but in this case the text is not recommended to contain sensitive information as speech recognition takes place abroad. Speech recognition can also be done with the recognition of punctuation marks using offline ABSONIC speech recognition (on local private-company/institution computers or on private-company/institution but central servers), in Hungarian when the text contains sensitive information, in which case security is provided by the user's own computer.
- **LECTURESTATION – A speech recording / displaying / forwarding system that allows lectures, training and speeches to be displayed real time on the screen in a lecture hall:**
  - Social, academic and other education, trainings, lectures, conferences are the daily practices of human interaction and information exchange. So there is a wide spread need for its further development and improving its efficiency in all areas using the most up-to-date infocommunication solutions.
  - The voice recording and script of the lecture may be recorded on the computer in the lecture hall and can also be uploaded to a server using a network connection.
  - The voice recording and/or script of the lecture may be followed visually on a projector screen and also in real time on portable computer and smart phones in the room or via online broadcast anywhere in the world. Local visual display can be done using a projector, a LED/LCD wall or a giant screen display. Displaying during a presentation can be achieved if required: with two projectors or one projector with two inputs, with video subtitler, video mixer, with holographic display etc.
  - Real time or stored speech recognition can be done in a prescription based online mode (GOOGLE registration approx. 0,016 EUR/minute ~ 1 EUR/hour ~ 100 EUR/100 hours ~ 1000EUR / 1000 hours) without the recognition of punctuation marks but in this case the text is not recommended to contain sensitive information as speech recognition takes place abroad. Speech recognition can also be done with the recognition of punctuation marks using offline ABSONIC speech recognition (on local private-company/institution computers or on private-company/institution but central servers), in Hungarian when the text contains sensitive information, in which case security is provided by the user's own computer.
- **INFOCOMSTATION – Writing down infocommunication exchanges into scripts after recording, which may require manual correction:**
  - The content and value of the different communications on various telecommunication and IT devices, lines and channels may require them to be recorded on the speakers' computer (as well). For this we provide telecommunication adapters of our own manufacture. The stored infocommunication exchanges can be written down by using speech recognition in varying quality depending on the quality of the speech transmission and the speaking style of the speakers. The accuracy of such scripts is a bit lower than that of good quality microphone recordings, see DICSTATION, LECTURESTATION and MEETINGSTATION.
  - Lines to be recorded and types of devices, simultaneously up to 128 channels:
    - Analogue traditional telephone
    - ISDN digital phone
    - VoIP internet phone
    - GSM mobile phone
    - SKYPE
    - Satellite phone (INMARSAT, IRIDIUM, THURAYA etc.)

- other infocommunication channels on request: VIBER, WhatsApp, SIGNAL
- Real time or stored speech recognition can be done in a prescription based online mode (GOOGLE registration approx. 0,016 EUR/minute ~ 1 EUR/hour ~ 100 EUR/100 hours ~ 1000EUR / 1000 hours) without the recognition of punctuation marks but in this case the text is not recommended to contain sensitive information as speech recognition takes place abroad. Speech recognition can also be done with the recognition of punctuation marks using offline ABSONIC speech recognition (on local private-company/institution computers or on private-company/institution but central servers), in Hungarian when the text contains sensitive information, in which case security is provided by the user's own computer.
- **RECSTATION – Saving on your phone bill, recording mobile and other telecommunication/IT conversations, the protection of the caller's and the receiver's geographical information and call data in a separated manner: *Multiple protection and enforcement of institutional, business and/or interest!***
  - For businessmen, leaders, manager assistants, secretaries, agents, entrepreneurs, public servants, officials and private individuals who seek to cut the cost of their domestic and especially foreign infocommunication connections and also want to save their conversations for subsequent processing and use.
  - Through a more economical execution of domestic and international telecommunication exchanges, the computerized, remote selected connection and routing of the below lines and devices:
  - More economical management of domestic and international telecommunication conversations, the following lines and equipments with different solutions, computer, remote selectable connection, direction selection:
    - analouge phone
    - ISDN-IP phone
    - VoIP phone (wired and wireless)
    - Mobile
    - SKYPE
    - Satellite phone (INMARSAT, IRIDIUM, THURAYA, stb)
    - Other infocommunication lines (as demanded VIBER, WhatsApp, SIGNAL)
  - For this we provide connecting computer devices that become own property, require no surveillance, operate automatically, can be remotely supervised and controlled, combined with computerized speech recording if required.
  - In the institutional, commercial and private sectors, the protection of the location and telecommunication data of the caller and the receiver. Thus the enhancement of our security, protection of interest against illegal business or private espionage and intelligence. The caller and the receiver, just like the connecting + speech recording computer station, can be at any three different geographical locations in the country or the world.
  - The speech recognition of infocommunication connections is also possible according to the below.
  - To protect the location and telecommunication data of the calling and called parties in the institutional, business and private sectors, for example, to strengthen their security, protection of their interests, protection against illegal business or private espionage, news and information. The caller and the called party, as well as the interconnecting + voice recorder computer station, can be at any three geographic locations in the country and even in the world.
  - Voice recognition of infocommunication connections is also possible as follows.
  - Real time or stored speech recognition can be done in a prescription based online mode (GOOGLE registration approx. 0,016 EUR/minute ~ 1 EUR/hour ~ 100 EUR/100 hours ~ 1000EUR / 1000 hours) without the recognition of punctuation marks but in this case the text is not recommended to contain sensitive information as speech recognition takes place abroad. Speech recognition can also be done with the recognition of punctuation marks using offline ABSONIC speech recognition (on local private-company/institution computers or on private-company/institution but central servers), in Hungarian when the

text contains sensitive information, in which case security is provided by the user's own computer.

***From all the services listed above, we only activate the software options and functions required by the customer. Upon request, we completely remove the not required ones from the software. The customer receives a document listing the active and inactive features, which can be reviewed by the customer's experts.***

#### ***Hard-copy service***

- wide range of printing configuration options (list of audio recording, the log file, registers, statistics and the internal phone book can be printed)

#### ***Accessories and add-ons***

- Telecommunication adapter- and several microphone accessories ensure to satisfy a wide range of customer requirements. Such accessories are the external controlling devices, ISDN2 telephone modems (cards), MP3 players, analogue and digital voice recorders, mobile phone accessories, headsets, microphones (conference microphones, tie-pin microphones, earphones/microphones, wireless microphones, and hand-held or desk-top microphones), mixers, separated and network-attached storage devices with high capacity. Devices for listen the created audio recordings, such as wired or wireless speaker boxes, headsets, etc. We recommend hubs for wireless connection of devices with USB interface to the computer's USB port. The quality of the recordings can be considerably enhanced with the recommended voice processing software. The telecommunication adapters meet the international requirements and standards.
- Accessories are sold only along with our software. Add-ons are sold primarily with our software.

#### ***Commercial and sales information***

- There is a supplement to this short technical information sheet. It is the list price of full catalogue including accessories and add-ons. In case of volume purchase with a wider range of functions a 50 pages detailed technical description is supplied to specific orders.
- DEMO version helps for the software recognition.
- A presentation of system can be arranged at the customer's premises or any other specified place primarily in Hungary. The presentation is strongly recommended before purchase.
- Having an appropriate agreement, the system can be temporarily installed for testing on demand.
- ABSONIC v2 system can be used in a variety of computer- and/or telecommunication environment where the ambient conditions are very complex. Therefore, to have mutual conviction about the success of system's installation, on a special form to the survey of infocommunication (telecommunication and informatics) environment is recommended. An improper purchase can be avoided only this way.
- The software system of ABSONIC v2 consists of modules and options on the basis of services provided. This facilitates meeting a variety of needs with different prices.
- We take guarantee for the voice recording system in case that it used with our accessories and add-ons only.
- Delivery depends on the results of the survey of the IT and telecommunication environment and also on the volume and the ordered configuration, may be expected between 10 to 30 days.
- Further information on our computer voice recording system can be found on and downloaded from our web site: <https://absonic-ict.eu/>

#### ***System support***

- The installation of the system is relatively easy but the involvement of an IT expert with suitable education, experienced in multimedia applications (primarily the system administrator of the computer network) is recommended, although our company is at the customers' service in this way, as well. The installation may be delayed or even fail without an expert, especially in case of systems with a higher number of channels. Our company undertakes the training of the customers' experts for the installation, as well.
- It is suggested to involve telecommunication experts (in the first place those, who manage the network) with connecting to the telecommunication network.
- We undertake later support of the system as well, including development demands, too.

**If you need more information or consultation, please contact us!**