

Cyb® - Intelligence at hand

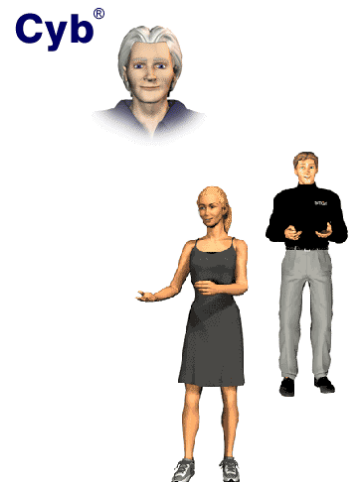


What is Cyb?

Cyb – Create your bot - is a next-generation Personal Assistant Agent. Cyb makes the restrictive dialogue-windows based Man-Machine communication obsolete. Cyb offers a user-friendly, natural language dialogue based communication solution.

Cyb advises, offers support and gives assistance. It coordinates and schedules appointments and organises documents. It is a personal secretary and a personal librarian. You can delegate your Cyb routine and even decision-making tasks. The Cyb shows up when the user needs help and disappears when it is no longer of use.

Moreover, as a representative of its user's interests, the Cyb can engage anytime complex negotiations with foreign CyMON-Agents resident on providers' sites or with peer Cybs. Via its mediation and delegation support the Cyb offers a much more intuitive and efficient access to the local (desktop, PDA, cellular, etc.) and external software, services and digital resources.



We build social-intelligent Personal Assistants through:

Evolving Intelligence

The Cyb “lives” as digital creature on the user’s terminal equipment. Through continuous interaction with the user, Cyb incrementally learns his interests, preferences and even wishes. Everything the user says or does not say, everything the user does or does not, is monitored and minuted by the Cyb. The Cyb uses intelligent Questions to get more and more closer in understanding the nature of his owner. Via permanent revision of the knowledge about the user (user model) the Cyb gets more intelligent.

The Cyb is “looking over the shoulder” when the user is active on his terminal equipment and builds a semantically rich interests-profile. Via dialogues with the user, the Cyb learns relevant facts and information that it subsequently uses to give active support during the work.

The Cyb already knows a number of information sources in the internet and learns to use personal information sources (local or in an intranet). The user can invoke his Cyb for searching information relevant to individual interest themes. The Cyb simplifies the usage of the internet by offering a theme-oriented navigation and search capability. For the computer illiterate the Cyb is a real help in offering constant support and consultation.

Dynamic Profiling

The Cybs intelligence is mirrored in the domains’ coverage, depth and evolving nature of the user profile. The longer the interaction with his user is, the more knowledge is acquired that finally helps the Cyb to better assist and support the user at his current activities. Missing profile information is gained through focused contextualised question. This is a long lived process that tracks and adapts to the everyday changes in peoples life.

Opt-in / Opt-out Functionality

Profile data is kept locally and belongs exclusively to the user. The profile data is protected against malicious use via sophisticated encryption and security mechanisms. It is the users sole decision if , how and when to open or deny access to profile data to external entities. The management of opt-in / opt-out functionality provides the user with a flexible and effective empowerment tool. The user can use profile data as means of payment and thus profit from external offers and rewards. He can also selectively or totally block external access to its profile data. He can also delegate his Cyb to manage the opt-in / opt-out functionality with external providers.

The user can create special shared profiles reflecting particular personal interests / preferences and selectively provide them to external business entities in order to receive personalized offers. The user maintains full control over this profile data and can even participate in the value-chain of the external provider. A particular case is that in which the user directly commercialises his own profile data.

A high degree of automation and efficiency of the opt-in / opt-out functionality is achieved in Cyb-CyMON scenarios.

What are the Benefits for your Company?

Cyb offers a media to engage the user in a considerably deeper dialog as the standard human-machine interaction solutions offer. As such not only demographic and hard data but also soft data like moods, opinions and personality are considered. The wealth of profile data gathered by the Cyb is of tremendous value for implementing effective 1 to 1 business and customer loyalty programs.

On the other hand Cyb is for you a first class marketing platform that brings the assets of your brand right on the users desk top. The virtual assistant can take any form and colour, bear any logos or icons and thus be the ideal embodiment of your brand and business strategy.

Peering Cyb and CyMON

The combination of the Cyb with the server-side CyMON platform provides the maximum of synergy and cross-fertilization for implementing efficient 1 to 1 business solutions.

Profile data generated by the Cyb and approved by the user to be shared can automatically be pushed on the external CyMON-server. Profile data generated by the CyMON application can be sent back to the Cyb. This peer-to-peer data-spiral provides the ideal solution to learning more detailed and exact information about the user.

Additionally, the Cyb can gather also other profile information from the CyMON server and use such information for pursuing the business goals of his user.



Anatomy of the Cyb

The Cyb learns permanently from his user, by watching his local and on-line activities and by engaging him in conversations. Based on his knowledge modules and skills, the Cyb is able to assist his user in an active, intelligent and pleasant manner.

The Appearance

- **The embodiment** of the Cyb is an Avatar that interacts with the user in natural language. The Avatar poses an own personality / character - that of a real friend, and he is able to show it during his interaction with the user via a number of emotional states. The default-Avatar can be personalised either by the user or by an external provider, and thus embody brand characteristics. Companies that already use a brand-character can map this directly to the Cyb embodiment, and thus be present on the users display during all his activities.

The Brain

- **The speech centre** of the Cyb is the Natural Conversation Engine. This is able to analyse natural language textual input and extract its contextualised meaning. A linguistic knowledge base module ensures accurate morpho-syntactic and semantic disambiguation and references via a set of interaction rules the proper dialogs as reaction to the natural language input. Besides being capable of tracking discourse topics and returning accordingly appropriate dialogs, the Natural Conversation Engine references also other knowledge bases in order to offer the user relevant information.
- **The knowledge centre** of the Cyb is the collection of knowledge modules that bear the semantic representation of the different domains of expertise. The Cyb has the skill to dynamically update or extend his knowledge base.
- **The memory centre** of the Cyb is the organised in a short-term and long-term memory compartment. The long term memory stores all information pieces related to all the domains of expertise the Cyb has as well as the complete user profile, whereas the short-term memory contains only the current session relevant information. The Cyb memorises of course also all the activities it is aware of and stores them in a time-stamped format into a log file.
- **The learning centre** of the Cyb is the Learning Engine. Based on own experiences, this sophisticated AI-based component ensures the continuous adaptation of the Cyb to the changing interests, needs and behaviour of his user as well as to the changing external information environment.

The Skills

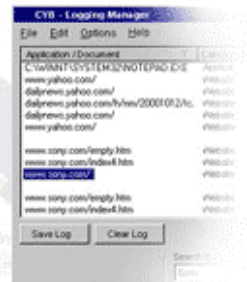
- **Privacy Management** (Anonymiser, Security) The Cyb acts as a proxy and can deliberately anonymise the user's Net activities. Additionally, the Cyb offers a high degree of security via P3P, SSL and PKI technology.
- **Opt-in / Opt-out Management** (Profile Management) Profile information is solely managed by the user. Cyb offers a comfortable and secure tool for the management of public-shared profile information, i.e. opt-in / opt-out functionality. This functionality can be used also for implementing intelligent filtering or for achieving portability of profile data, in that profile data is stored (opt-in) on an always-on trusted server site like e.g. Cybs-Garage, and accessed by the user application any time and from any place via a secure profile management interface.
- **Password Management** Cyb can remember all identification and authorisation information like Uid Names and Passwords and automatically fill the in when required. This enables a comfortable access to personal or personalised information on registered or subscribed sites
- **Record&Play** Cyb assists his user in the repetitive undertaking of complex tasks like chained monitoring, query and editing of Web-site information, or event-driven task execution. For the advanced user this functionality is enhanced by the provisioning of an scripting API.
- **Recommendation** Being always aware of the short and long term needs and interests of the user brings the Cyb in the position of making relevant recommendations at the most appropriate time. The recommendations span the whole knowledge centre and include links to similar or related local or external information, or links to other relevant peers (users, Cybs or CyMON-sites).
- **E-Mail Management** Different from standard office –software where e-mail management is based on simple exact-match rules applied to the header elements only, the Cyb can manage all e-mail accounts based on complex semantic-match rules applied to all e-mail information elements including the body. Additionally, can the Cyb be instructed or learn from the behaviour of his user when and which e-mail functionality to start.
- **Calendar Management** Starting or ending of user-defined tasks at a predefined times or schedule management are among the most useful calendar management skills the Cyb has. He can also detect conflicts among scheduled activities and make suggestions for resolution.

Cyb has a modular architecture. Additional to the basis version, a number of extra modules (appearance, language, knowledge, skills, etc.), and updates are available. The user can choose from a number of knowledge modules including ontologies, collections of indexed and annotated documents and links, external user, provider or product profiles and download them over a specialised Cyb-download-interface. One of the best Knowledge Sources is the Agentscape's portal Cyb's Garage (www.cybs-garage.de). This site provides trustful quality-proven, up-to-date resources for the whole Cyb-Community. Cyb's Garage is in this context a Knowledge Broker. Here one can find e.g. new interaction rules, dialogs or special ontologies, download them and have them integrated into his own Cyb

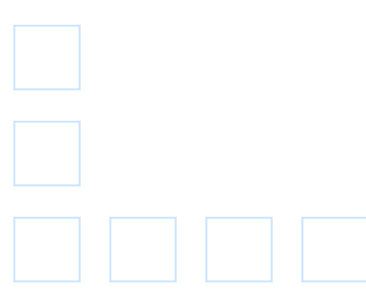
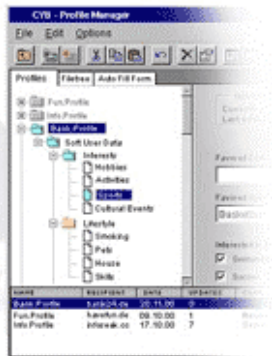
Cyb[®]



Logging Manager:



Profile Manager:



What can Cyb do for the User?

As a personal assistant, the Cyb communicates via natural language and is aware of all activities and interests of his user. Of course he uses all his brain and skills to better serve his user.

The following gives some snapshots of Cyb's conversation and assistance:

1. Task: make money transfer

User: I would like to pay my fines. Could you transfer twice 30 Mark on the cops account?

Cyb: I repeat: money transfer of 2x30 Mark for penalty to the Polizeipräsidium in Berlin

2. Task: retrieval of a document

User: I started yesterday to write a cancellation letter to the third-party insurance. I can't find the damned thing again.

Cyb: The document is in the folder own files/private/cancellations.
Shall I open it for you?

User: Yes, please..

Cyb: Here you are[opens document]. Have fun!

3. Task: Get quote

User: how's going to my stock?

Cyb: Which quote can I get you?

User: Get me the quote for PopNet Internet AG.

Cyb: OK, one moment please![opens window] The quote lies now at 9 Euro.

4. Task: Search for a CD in on-line shops

User: I like very much the new CD of Sade. How much is it?

Cyb: I will compare several on-line offers and come back later to you.

User: Very well! I'm anxious for it.

(Shortly after)

Cyb: The cheapest offer of the new album of Sade (Lover's Rock) is at Amazon [www.amazon.de]. The price is DM 24,95. Shall I order it for you?

5. User: No thanks. I'll think about.

6. Cyb: No problem. I wait

Where do you find the Cyb?

Cyb's Garage

Cyb's Garage is the home harbour, the workshop of the Cyb. This is a portal, where basic-software and all modules can be downloaded from. This is the place where users find support services and communities of other Cyb-owners.

[Cyb's Garage is not yet on-line]

Cyb is also available as free download from many Partner-sites.



Xtreme
Personalisation



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