

What We Offer and How This Works: [English](#) | [Spanish](#) | [Russian](#) | [French](#)

Our [patented technology](#) increases efficiency of an enterprise in education, medical, project development, and more fields. The platform is implemented as Business Architecture Sandbox for Enterprise (BASE) with a rich set of services. The services are enhanced with AI components providing Conversational Semantic Decision Support (CSDS).

The screenshot shows a web interface with a search bar and several service buttons. The search bar is labeled "Enter text". Below it, the text "Search in the domain:" is followed by five buttons: "biotech", "dabhand", "energy", "ecr", and "itsp". Below these buttons, there are two lines of asterisked text: "* dabhand - Projects usually performed by handymen, like remodeling, etc..." and "* itsp - Internet Technology Summit Program at ITU - AI with Java and Python." Below this is a red banner with the text "Talk to me... What help do you need?". Below the banner are five buttons: "IT Troubleshooting", "Modeling Enterprise", "Project Brainstorming", "Capture Knowledge", and "Marketing Research". Below these are two more buttons: "Medical Cost Reporting" and "Semantic Stock Adviser".

Source code discovery? Proper documents?
Type a brief paragraph below...

Enter text

Search in the domain: [biotech](#) | [dabhand](#) | [energy](#) | [ecr](#) | [itsp](#)

* dabhand - Projects usually performed by handymen, like remodeling, etc...
* itsp - Internet Technology Summit Program at ITU - AI with Java and Python.

Talk to me... What help do you need?

IT Troubleshooting | Modeling Enterprise | Project Brainstorming

More Enterprise Services

Capture Knowledge | Marketing Research
Medical Cost Reporting | Semantic Stock Adviser

How this works

The system (BASE) serves as a partner in a conversational research, development, and decision-making processes.

1. A user starts a conversation with a paragraph or two describing user's area of interest, so called "knowledge domain".

The system uses semantic technology to outline the main **concepts or topics** in user's input.

2. Then the BASE is looking for the most relevant branches in the existing semantic knowledge graph trying at least partially understand the user.
3. This understanding can be very limited, especially in the beginning of using the system in a new knowledge domain.
4. Following the found knowledge branches the system will ask for confirmation or more often approach a user with clarification questions.

It is expected that the semantic knowledge graph will not be ideal from the beginning and would require a human touch by a Subject Matter Expert (SME). The BASE offers a powerful Semantic Editor helping SME to clean and improve the graph.

At each successful loop of this conversation the system will select one or more branches of the knowledge graph coming closer to the knowledge branch that identify user's intent and providing a user with detailed information according to user's intent.

At each unsuccessful loop the system will ask for more data sources to enhance the knowledge repository.

The main steps of growing the knowledge tree are illustrated below.



The current implementation has all the mechanisms and services described above, although there is still work ahead on improving precision and quality towards specific targets provided by clients.

Why conversation?

Google offers links and a searcher choose the best slowly moving up the path.

When people talk, they shortcut this process by asking questions.

We establish such conversations with the Conversational Semantic Decision Support – see AskCSDS.com

Check the [Semantic Graph](#) that covers Internet Technology Summit Program

You can see the internal link “Talk to our consultants” – actually AI Assistant, but if anyone from human-consultants online – they also can participate in this chat.

There must be a generic set of questions related to the generic properties of the model of a selected domain

We should set these questions as a core of a decision tree for AI Assistant; from each core question there should be branches (discovered by search) ended by a leaf (answer)

Subject Matter Experts (SME) can use the Semantic Editor to deal with topics / concepts stored to add/delete concepts, modify the model – add/delete properties and helping **conversion to ontology**.



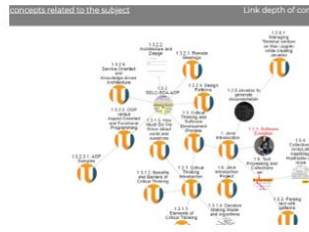
1. Manual –
Creating root data



2. BASE – search-service
increasing the set with
related data



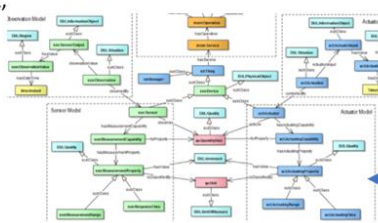
3. BASE - Creating a hierarchy and
a graph of semantic concepts



6. Improve system precision and
efficiency based on user input,
feedback, and evaluation



5. Ontology - based conversation



Find the closest ontology branch
with related descriptions and
clarification questions

Editorial Room for Knowledge Engineers
Welcome to expand, improve or export the currently selected {subject} branch of dabhand ontology

Change Domain

There are several ways to grow a knowledge tree.

4. Semantic Editor

a) You can add a URL or a Path to data sources.
Correct or add URL/Path to current references:
URL must start with **http** and Path to local files with **file://**

Update brief description

Dab Hand represents semantically rich collections of data from simple jobs like repair and

Limit Ontology Size

Editorial Room for Knowledge Engineers

Welcome to expand, improve or export the currently selected

124.1.2.Electronic_Reporting_Specifications_for_Form_CMS-2552-10 branch of *ecr* ontology

There are several ways to grow a knowledge tree.



a) You can provide a URL to a data source - web site.

URL:

Limit Ontology Size ▾

Schedule Graph Modeling

Schedule Graph Modeling Local

Delete Graph

b) Upload the knowledge seeds as a text file with triplets: subject-predicate-object



Place the seeds of knowledge tree as triplets

c) Upload the hierarchy of subjects as a starting point for extension.

Upload hierarchy of subjects

Title
First Subject
Second Subject
Sub-Topic
Another Subject

How ontology helps in the conversation?

Ontology is the most complete way to describe the domain knowledge. Ontology presented as a graph of connected branches and leaves.

There are methods to calculate which branch or even a leaf is the closest fit to the user's request.

If this is not leaf but a branch – the branch must be connected to a set of questions for a user to clarify further and eventually find a leaf = solution.

Feedback: If none of existing branches match criteria, the system sends the request to a knowledge engineer with the request to create a new branch.

The alternative is the request to the cloud with the automatic search on the Internet for the new branch.

(BASE has this alternative service).

Relevant links: [6 Steps](#)

<https://itofthefuture.com> | <https://captureknowledge.org> | <https://dabhand.us>

<https://ituniversity.us> | <https://patents.justia.com/inventor/yefim-zhuk>

Development Factory with Conversational AI

<https://patents.google.com/patent/US10956676B2/en>

Development Factory patent and its BASE implementation

<https://aitu.us/itu/DevelopmentFactoryAndBASE.pdf>

Conversational Semantic Decision Support: <http://AskCSDS.com>

[The message from 2040](#)
