

# Artificial Intelligence Learning companion



**Curious Cat**  
Assistive, Inquisitive, Addictive

Zala Herga  
Luka Bradeško

[curiouscat.cc](http://curiouscat.cc), [ijs.si](http://ijs.si), [cyc.com](http://cyc.com),  
[cycorp.eu](http://cycorp.eu)



# Outline

- Introduction to Cyc Artificial Intelligence
- Our approach towards “educating” a computer
- An example of the real world use





# WHAT IS BEHIND

- 1984: Cyc project starts (Dr. Douglas Lenat)
  - In order to be able to think like humans do, the computer needs to have knowledge about the world and the language like humans do.
  - the only way for machines to know the meaning of human concepts is to teach them, one concept at a time, by hand.
- 1994: Cycorp is founded
  - To foster the growth of semantic modeling and machine reasoning they offer a no-cost license to its semantic technologies development toolkit to the research community
  - OpenCyc: available to everyone
- 2013: Cyc - 500k concepts, 17k relations, 10mio logical facts (bits of knowledge)



# WHAT IS BEHIND (CYC)

## 3-Stage Research Program for AI

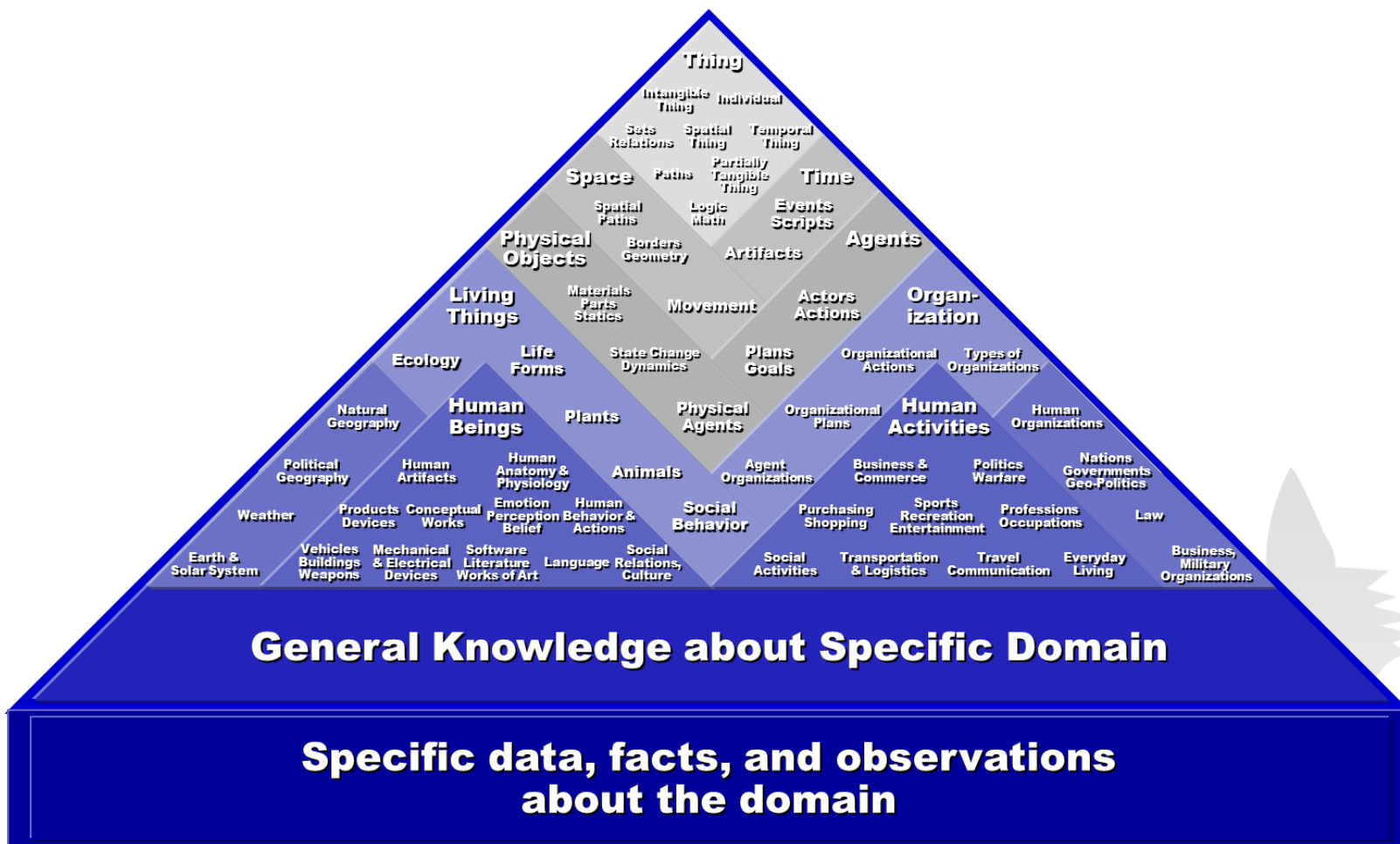
1. Slowly hand-code a very large and very broad KB.
2. When enough knowledge is present, the system should actively help with the KA process. It should be faster to acquire more from texts, databases, [websites], interactive dialogues, etc.
3. To go beyond the frontier of human knowledge, the system will have to rely on learning by discovery, to expand its KB domain by domain.

(Doug Lenat)





# WHAT IS BEHIND (CYC)

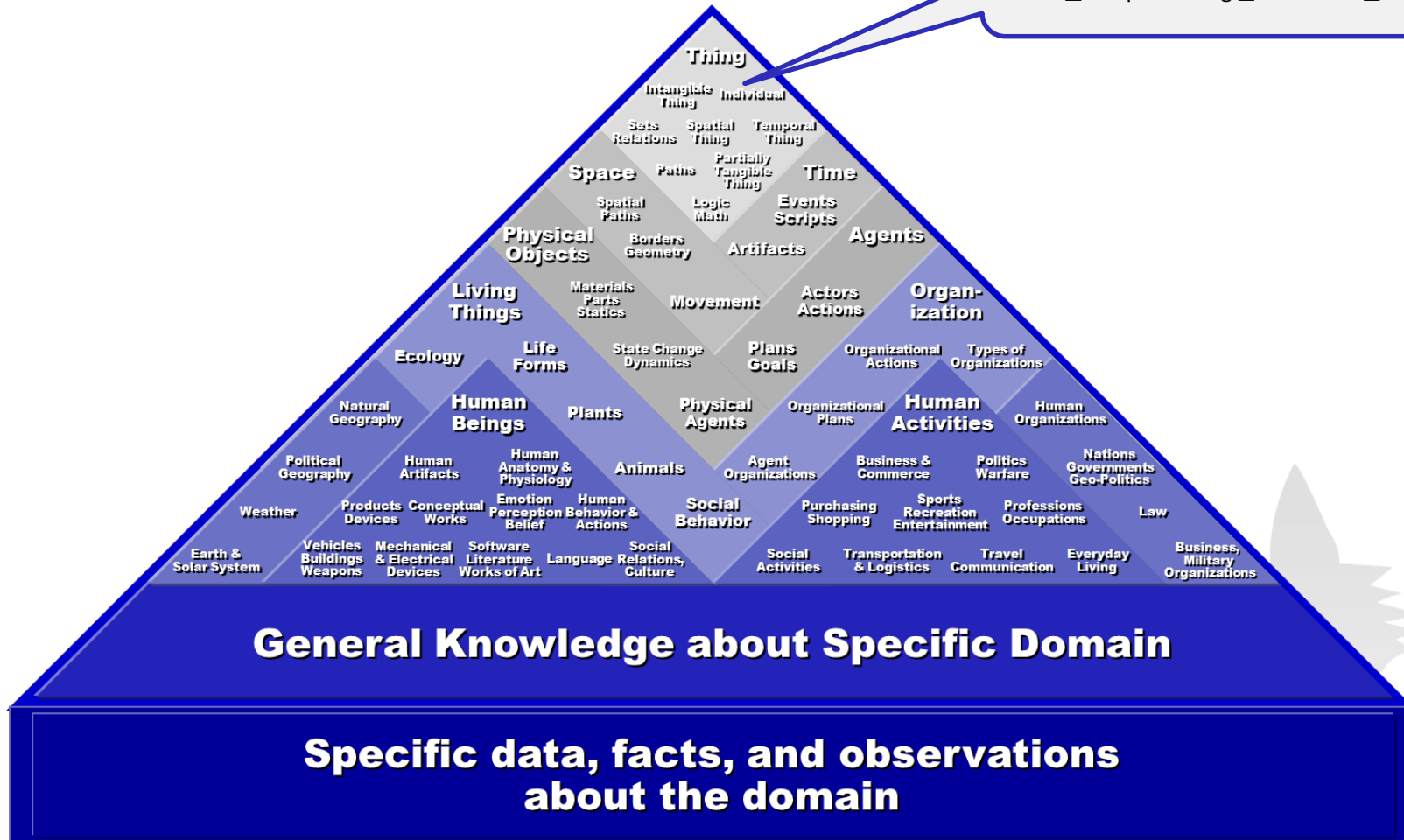




# WHAT IS BEHIND (CYC)

## Abstract concepts

Event  $\subseteq$  TemporalThing  $\subseteq$  Individual  $\subseteq$  Thing





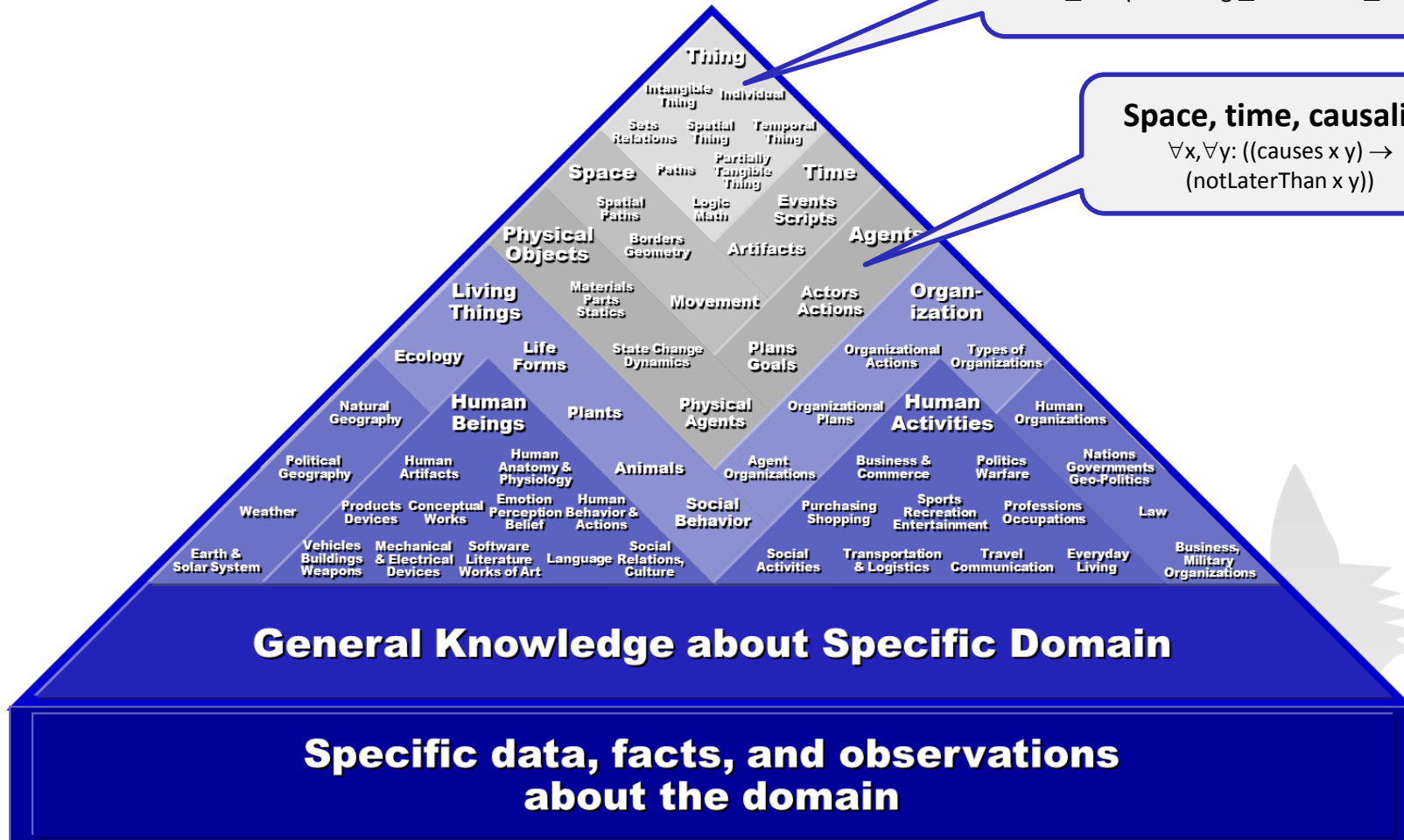
# WHAT IS BEHIND (CYC)

## Abstract concepts

Event  $\subseteq$  TemporalThing  $\subseteq$  Individual  $\subseteq$  Thing

## Space, time, causality

$\forall x, \forall y: ((\text{causes } x \ y) \rightarrow (\text{notLaterThan } x \ y))$





# WHAT IS BEHIND (CYC)

## Abstract concepts

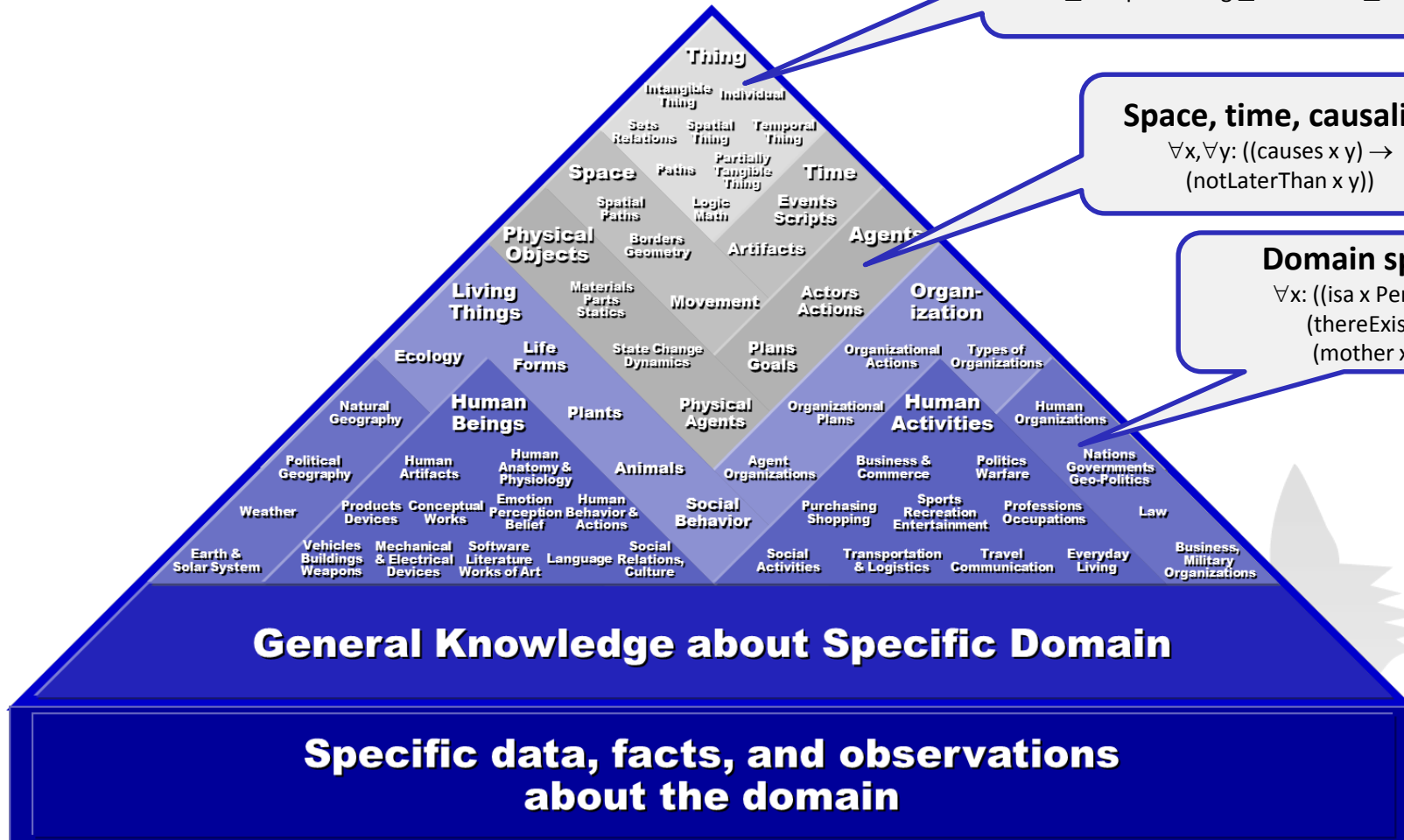
$\text{Event} \subseteq \text{TemporalThing} \subseteq \text{Individual} \subseteq \text{Thing}$

## Space, time, causality

$\forall x, \forall y: ((\text{causes } x \ y) \rightarrow (\text{notLaterThan } x \ y))$

## Domain specific

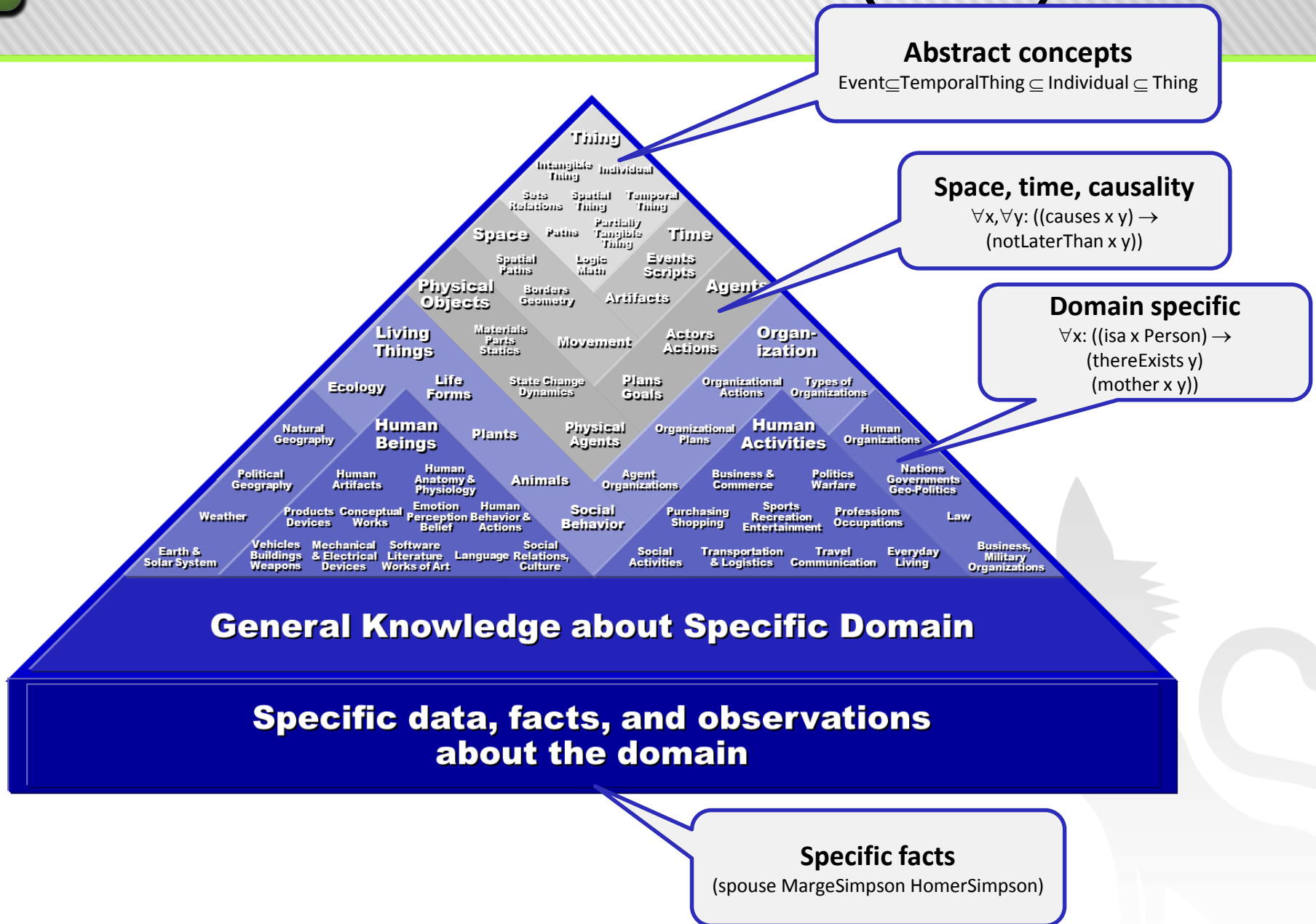
$\forall x: ((\text{isa } x \ \text{Person}) \rightarrow (\text{thereExists } y) (\text{mother } x \ y))$





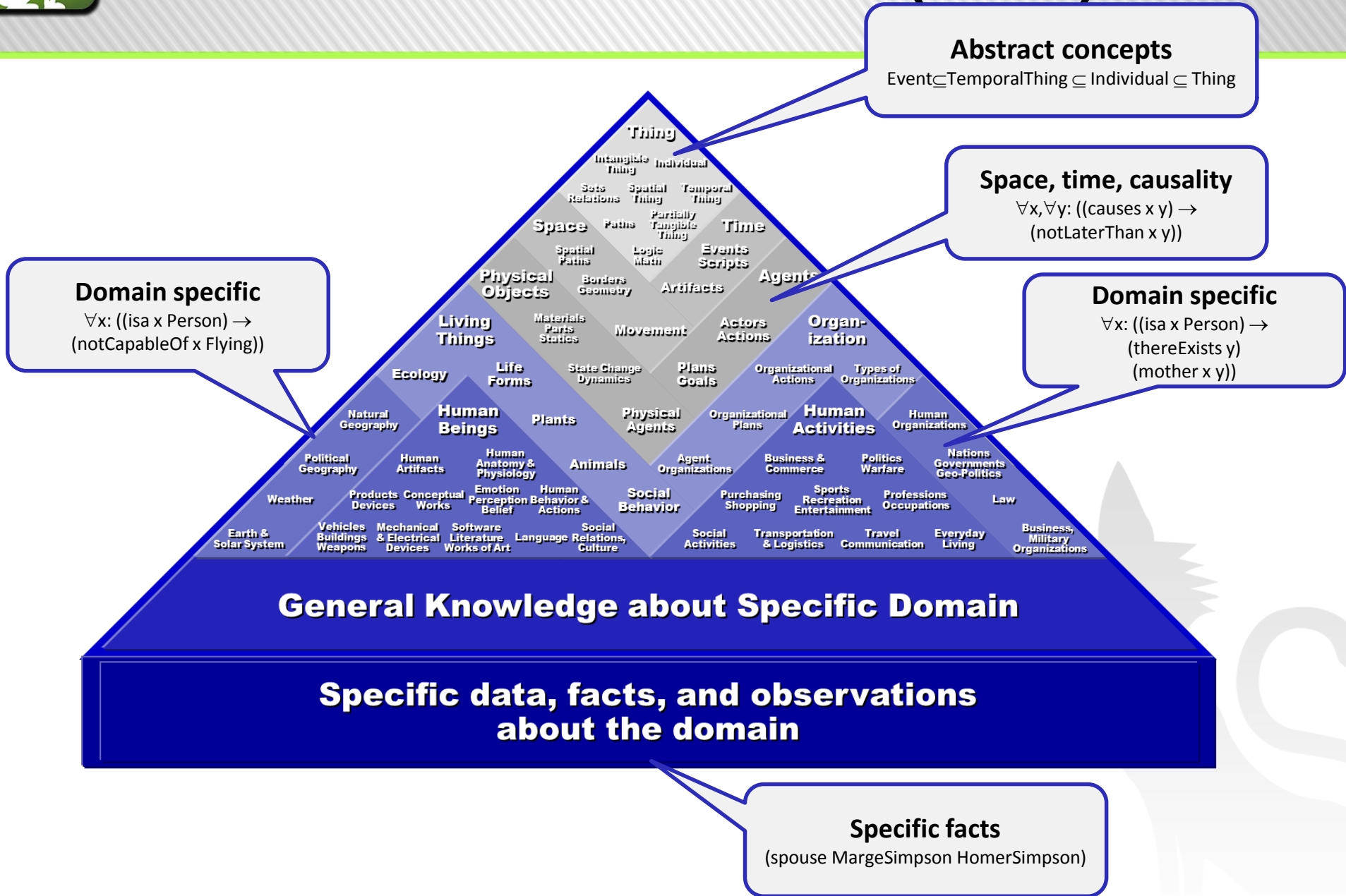


# WHAT IS BEHIND (CYC)





# WHAT IS BEHIND (CYC)





# CYC KNOWLEDGE BASE (EXAMPLE)

- *Education* event typically consists of many sub-events of *Learning* and *Teaching*
- Other types of education are *formal schooling*, *seminar series*, *online courses*, *science fair event*, etc.
- Primary function of an educational organization is to provide service of education
- Each *bird* is an air-breathing, warm-blooded, winged animal covered with feathers. Members of most, but not all, species of bird can fly.
- *Tangible objects* can't be in 2 (disjoint) places at once
- *A stabbing* requires 2 co-temporal and proximate actors. The stabbing itself is a *purposeful action*





# Example from KB

## Education

order by : [predicate](#) ontology  
filters : [predicate](#) ontology  
index view : [inferred](#) [legacy](#)

► [Browsing](#) ► [Editing](#) ► [Advanced](#)

[All Assertions](#) (9036) ► [open all](#)

▼ via [Education](#) (55)

[isa](#) +  
[isa](#) arg2 (2) +  
[gens](#) (2) +  
[gens](#) arg2 (8) +  
[disjointWith](#) arg2 +  
[comment](#)  
[candidateProperSubSituationTypes](#)  
[characteristicActivityTypeOfOrganizationType](#) arg2 (2)  
[codeMapping](#) arg3  
[definingMt](#)  
[fieldConcerning](#)  
[fieldStudies](#) arg2  
[groupTypeMemberType](#) arg2 (2)  
[ISNodeRawMeaning](#) arg2 (3)  
[multiWordString](#) arg4  
[peripheralConceptOfDomain](#)  
[properSubEventTypes](#) (3) +  
[properSubEventTypes](#) arg2 (2) +  
[rdfURI](#)  
[rdfURIInNamespace](#)

## ☆ Collection : [Education](#) [+]

on the term

[isa](#) : ● [FirstOrderCollection](#)

[gens](#) : ● [Event-Organized](#) ● [ServiceEvent](#)

[comment](#) : ● "A specialization of [ServiceEvent](#). Each instance of this collection is an event in which some [Person](#) receives some considerable quantity of knowledge which they did not have before. Any given [Education](#) event typically consists of many sub-events of [Learning](#) and [Teaching](#). [Education](#) events differ from [Training](#) events in their typically longer duration, and in the fact that one may be 'trained' in practical skills rather than intellectual knowledge."

[candidateProperSubSituationTypes](#) : ● [Teaching](#)

[definingMt](#) : ● [AgentGMt](#)

[fieldConcerning](#) : ● [\(FieldConcerningFn Education\)](#)

[peripheralConceptOfDomain](#) : ● [Analyst-PertinentConcept](#)

[properSubEventTypes](#) : ● [Learning](#)

[properSubEventTypes](#) : ● [Learning](#)

[properSubEventTypes](#) : ● [Learning](#)

[rdfURI](#) : ● "[http://dbpedia.org/resource/Education](#)"

● [\(rdfURIInNamespace Education DBpediaResourceNamespace "Education"\)](#)

[wikipediaArticleName-Canonical](#) : ● "Education"

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# Example from KB

[Education](#)

order by : [predicate ontology](#)  
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► [Browsing](#) ► [Editing](#) ► [Advanced](#)

All Assertions (4026) ► [open all](#)

☆ **Collection : [Education](#)** <sup>(+)</sup>

on the term

[isa](#) : ● [FirstOrderCollection](#)

[wiki](#) : ● [Event\\_Organized](#) ● [Studio\\_Event](#)

► [Arg 2](#) (3)

► [Arg 3](#) (3)

[All isa Rules](#) (10)

► [Antecedent](#) (10)

[Miscellaneous](#) (112)

**Mt : [OrganizationMt](#)**

**Direction : Backward**

● [\(implies](#)

[\(isa ?PUB \[Bar-DrinkingEstablishment\]\(#\)\)](#)

[\(actsInCapacity-MainFunction ?PUB \[seller\]\(#\) \[BuyingADrink\]\(#\)\)](#))

*Copyright © 1995 - 2013 [Cycorp](#). All rights reserved.*

[definingMt](#)

[fieldConcerning](#)

[fieldStudies](#) arg2

[groupTypeMemberType](#) arg2 (2)

[ISNodeRawMeaning](#) arg2 (3)

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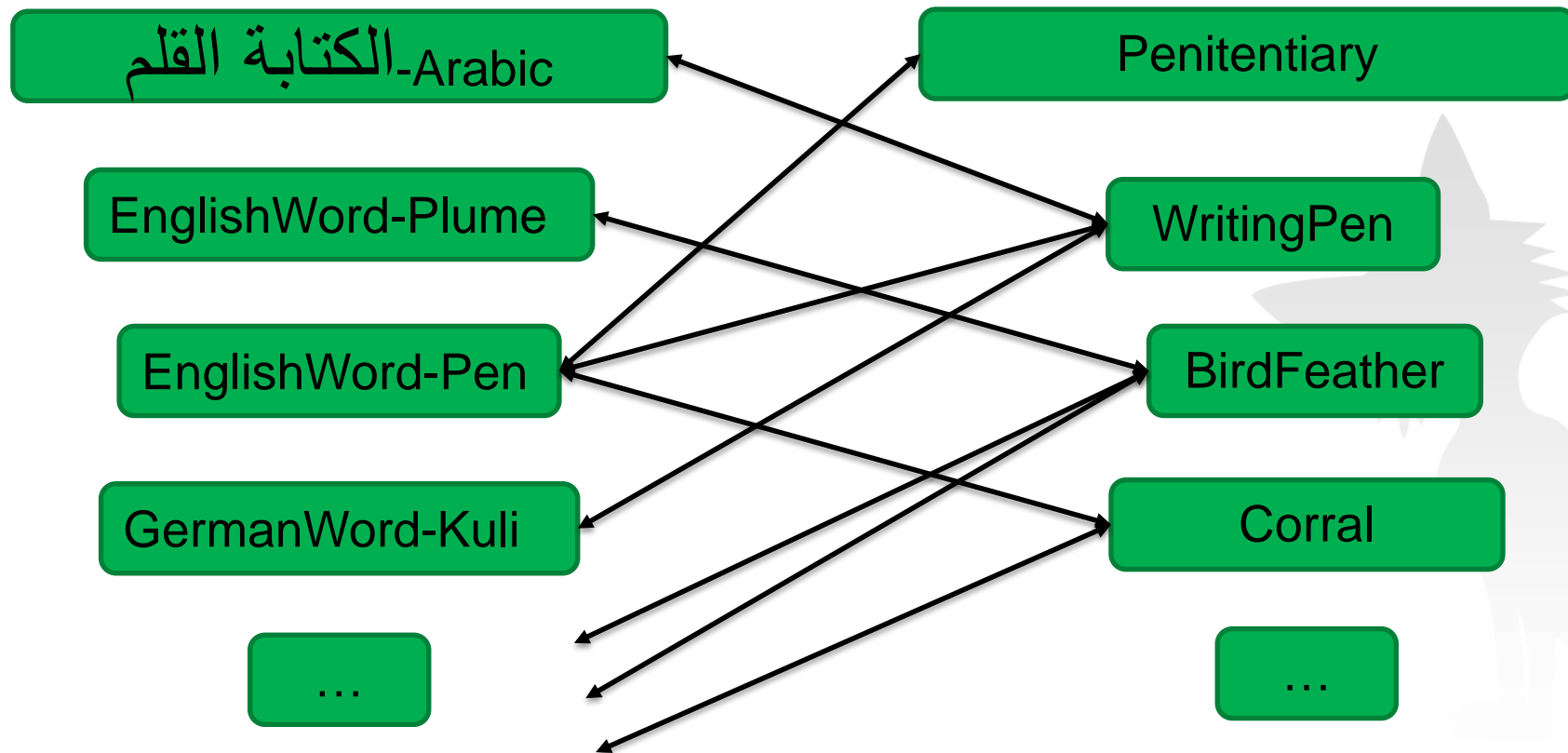
[wikipediaArticleName-Canonical](#) : ● ["Education"](#)

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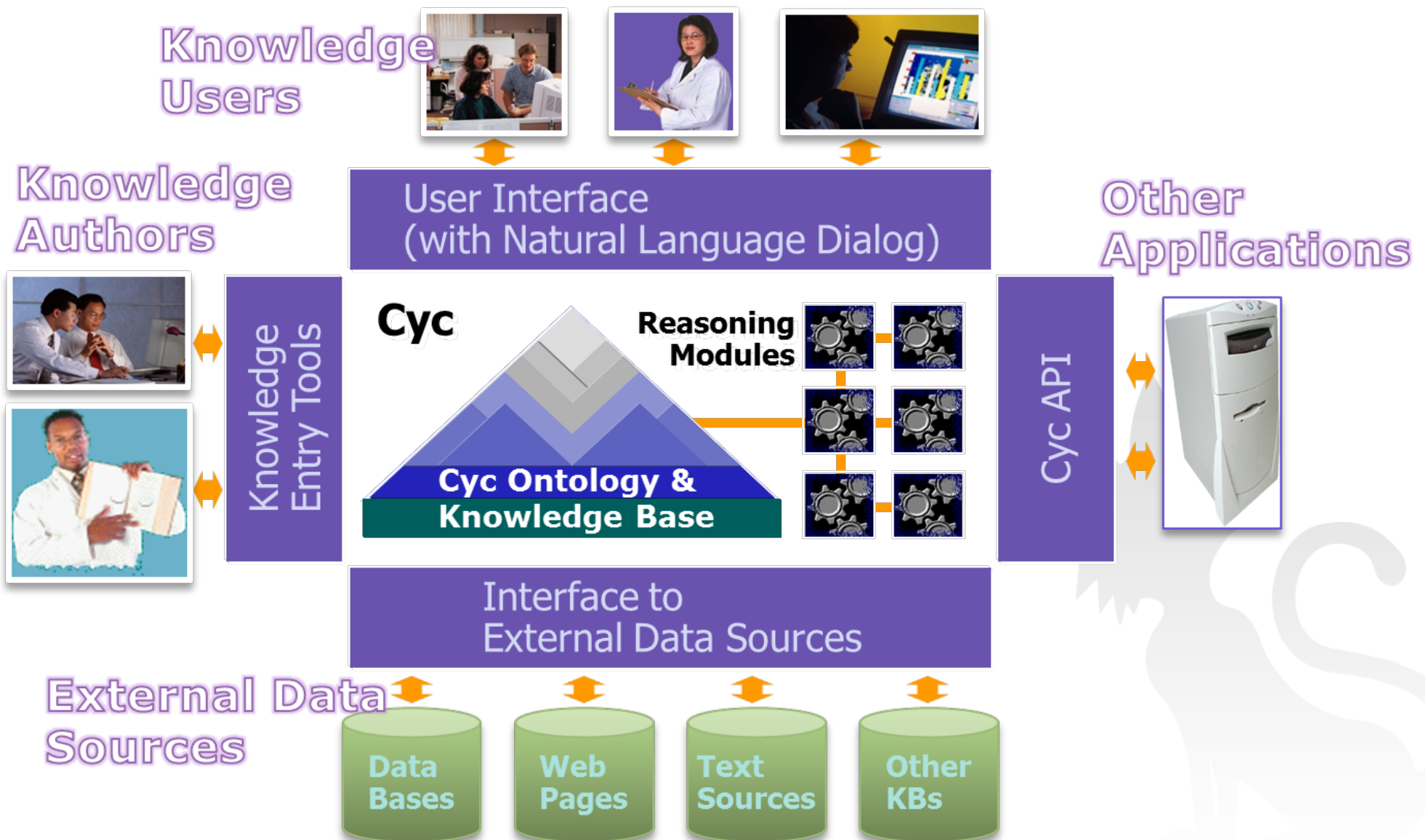
# CYC KNOWLEDGE BASE (NL PART)

- Linguistic information *about* a set of hundreds of thousands of terms
- Language-independent





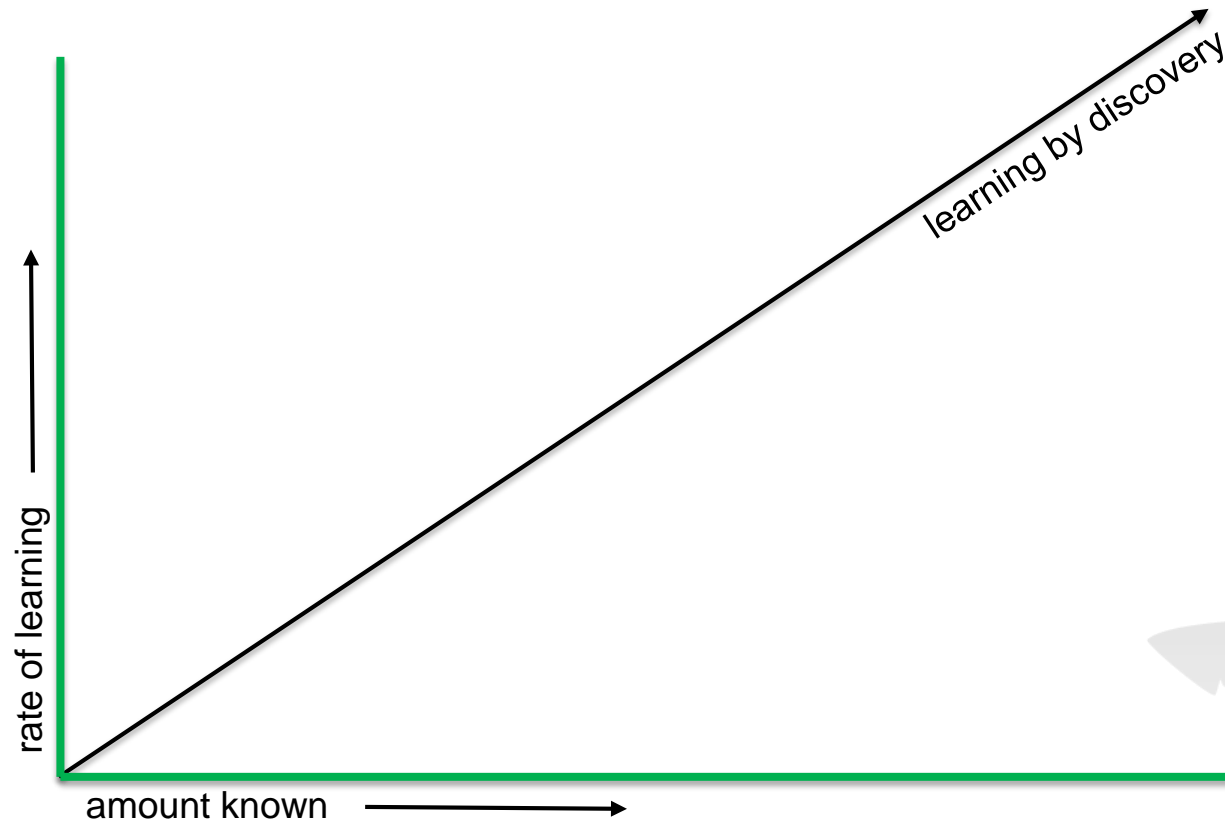
# Cyc System Architecture







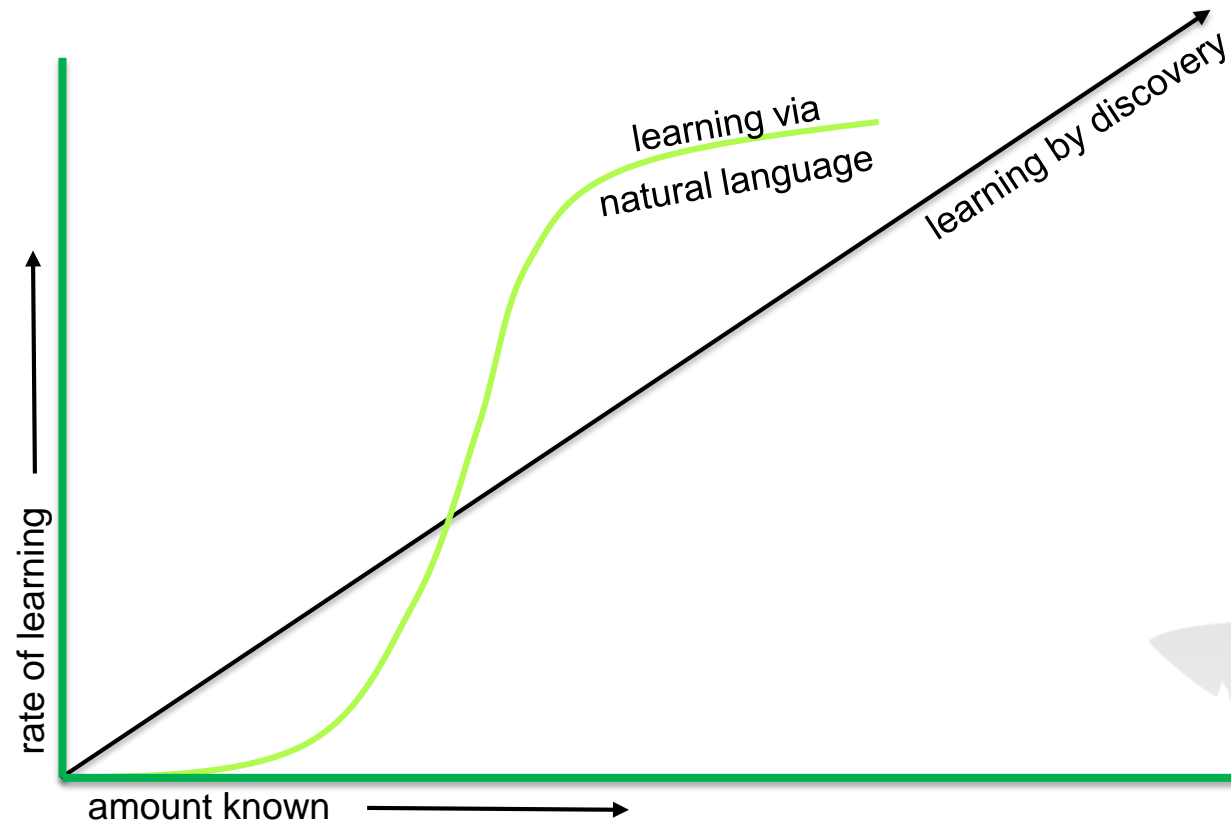
# WHAT IS BEHIND (CYC)



(Based on the slide by Doug Lenat)



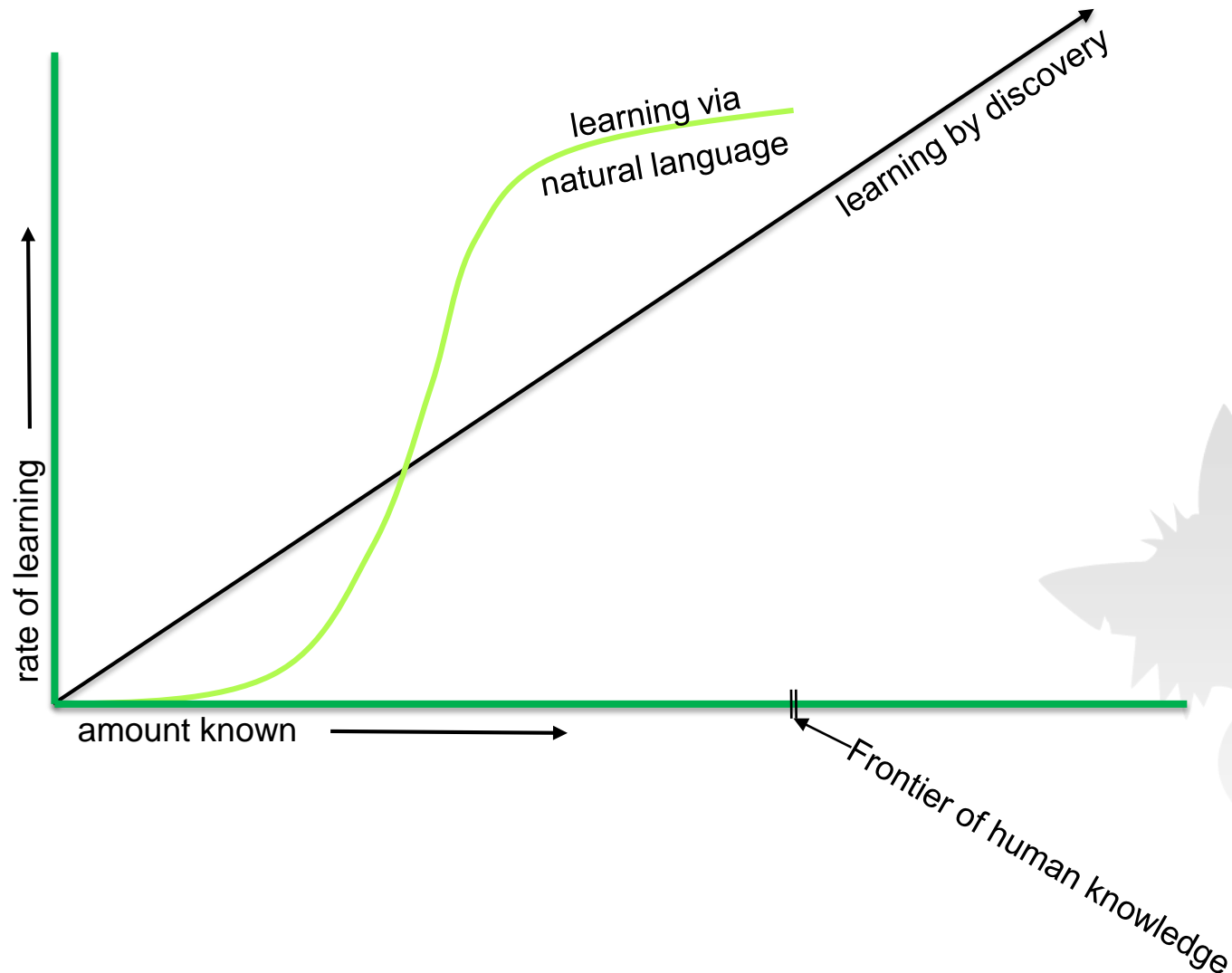
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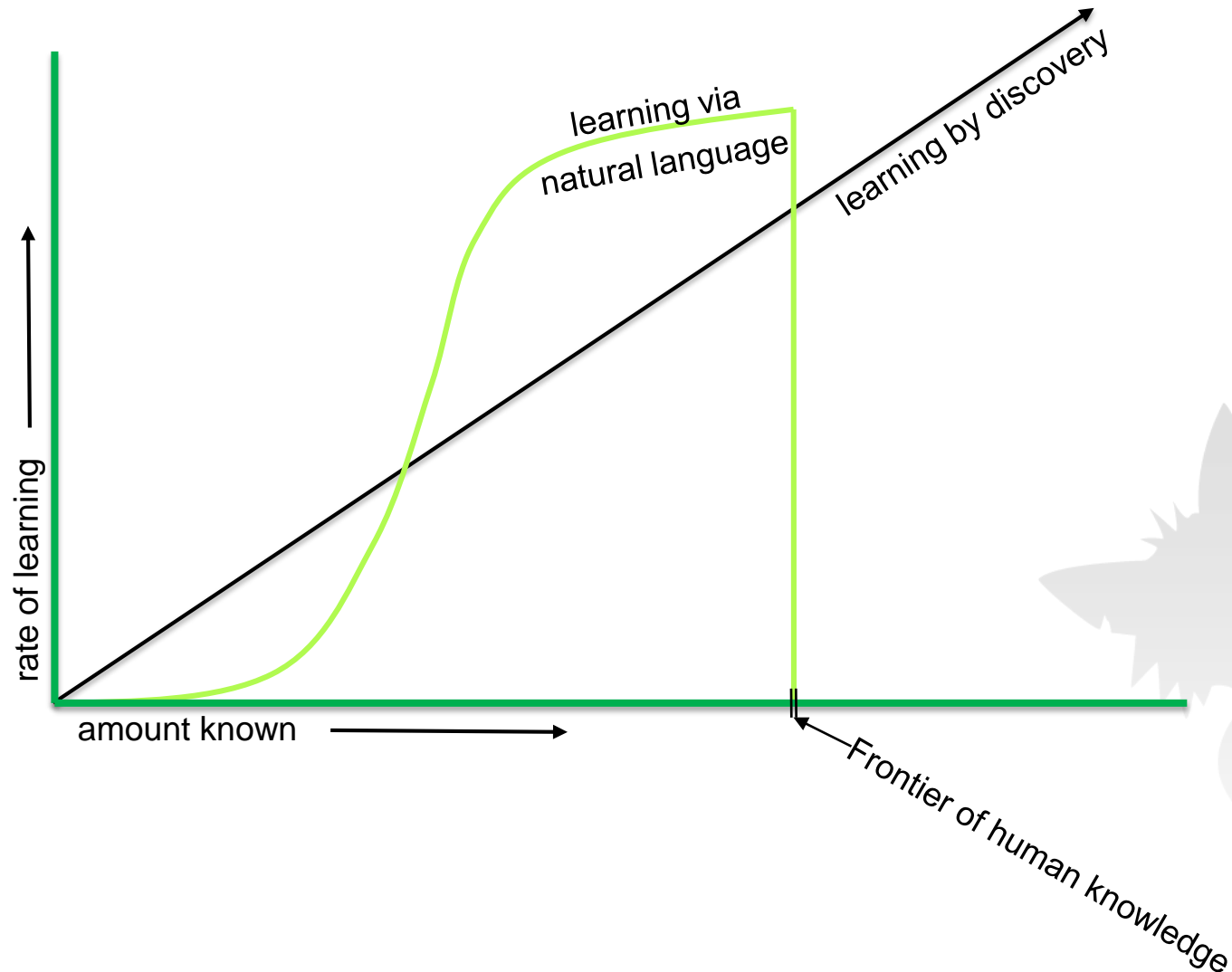


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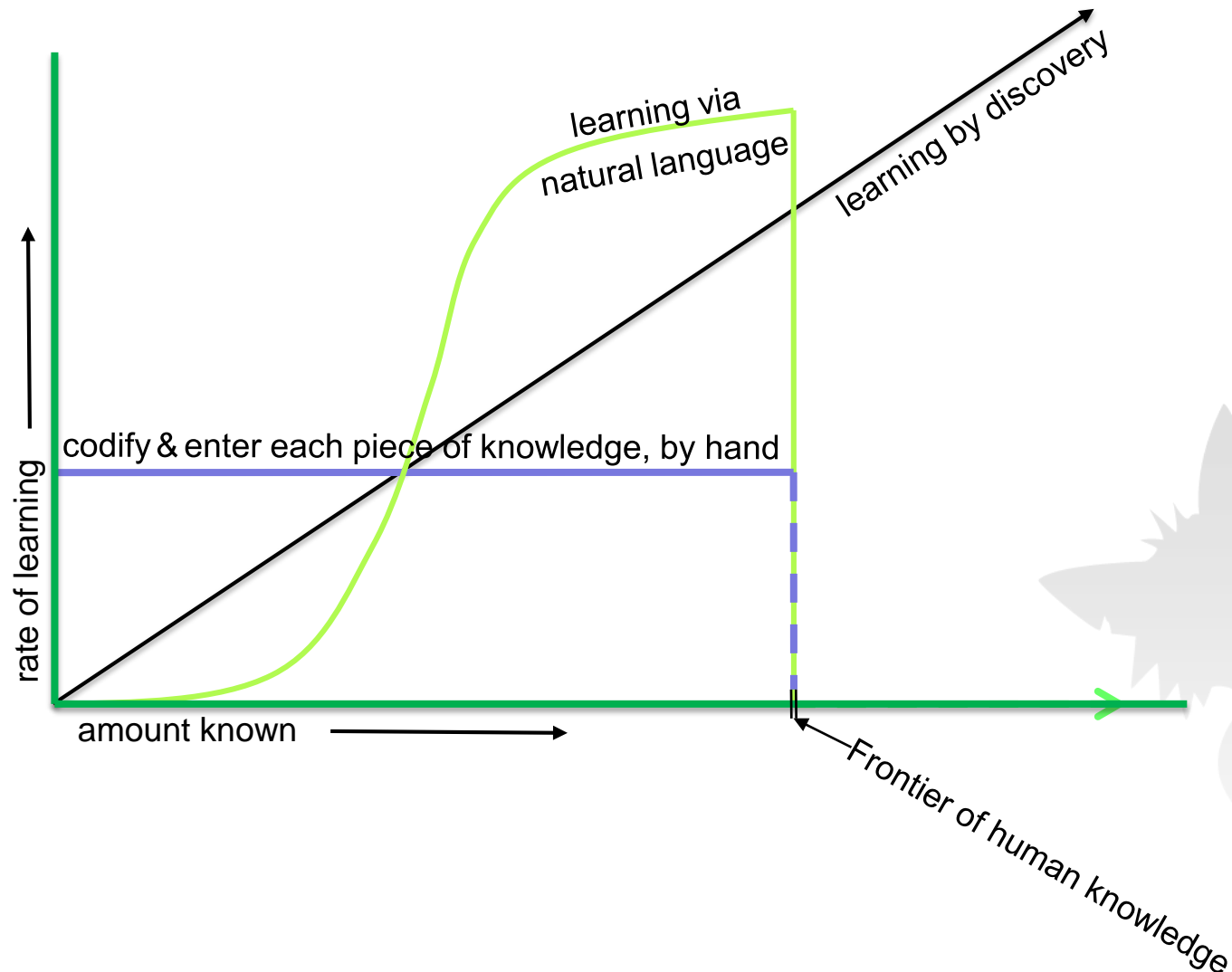
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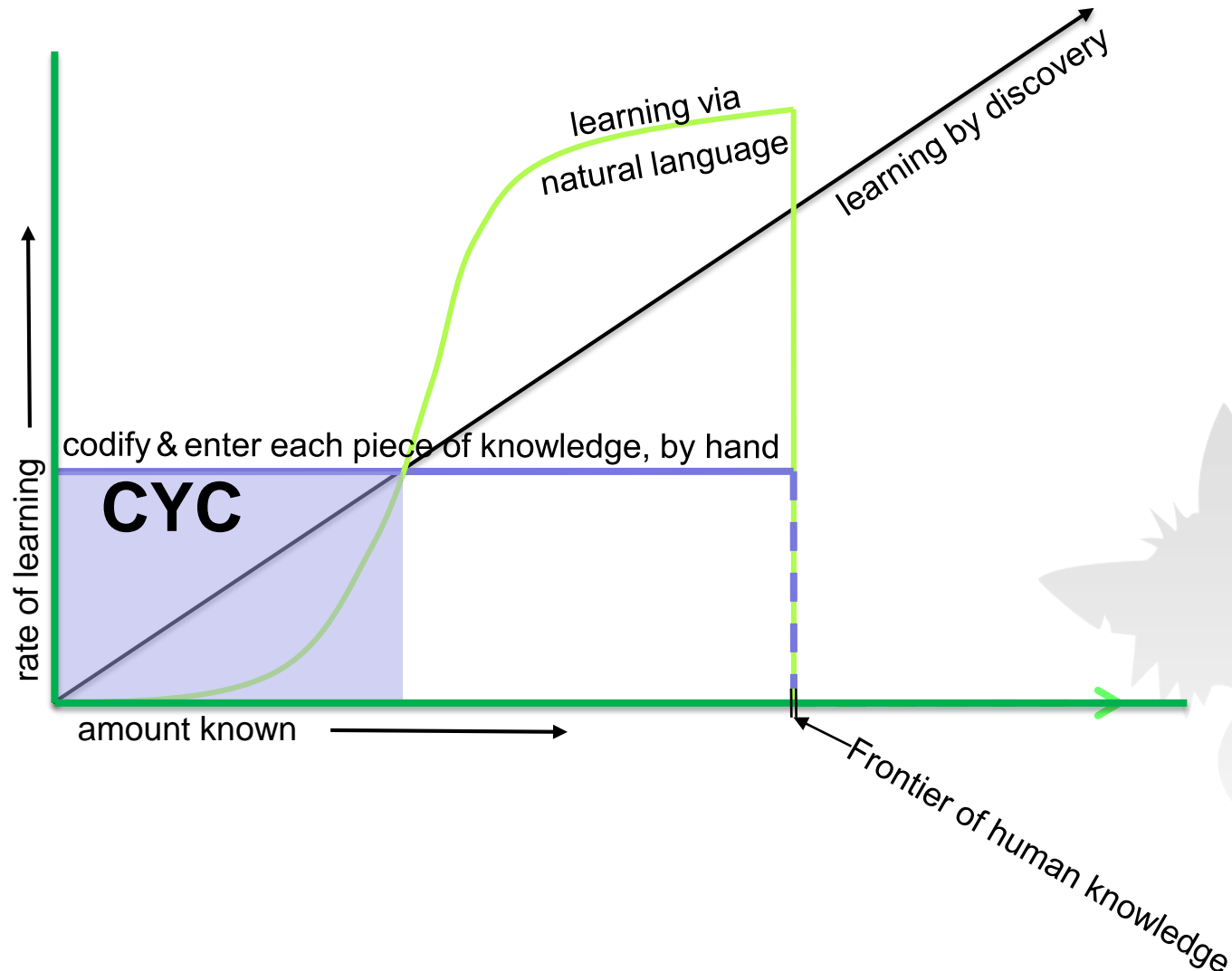
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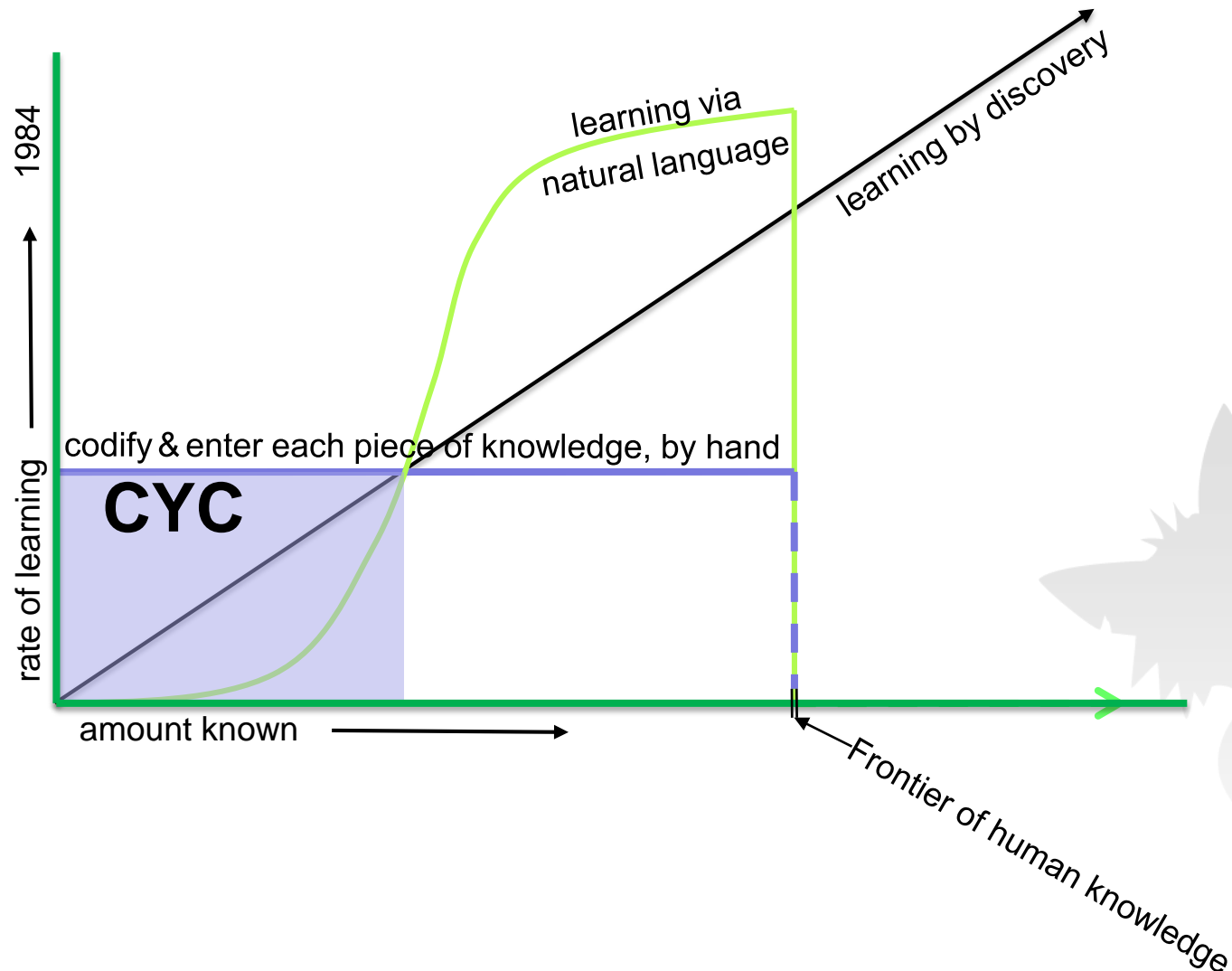
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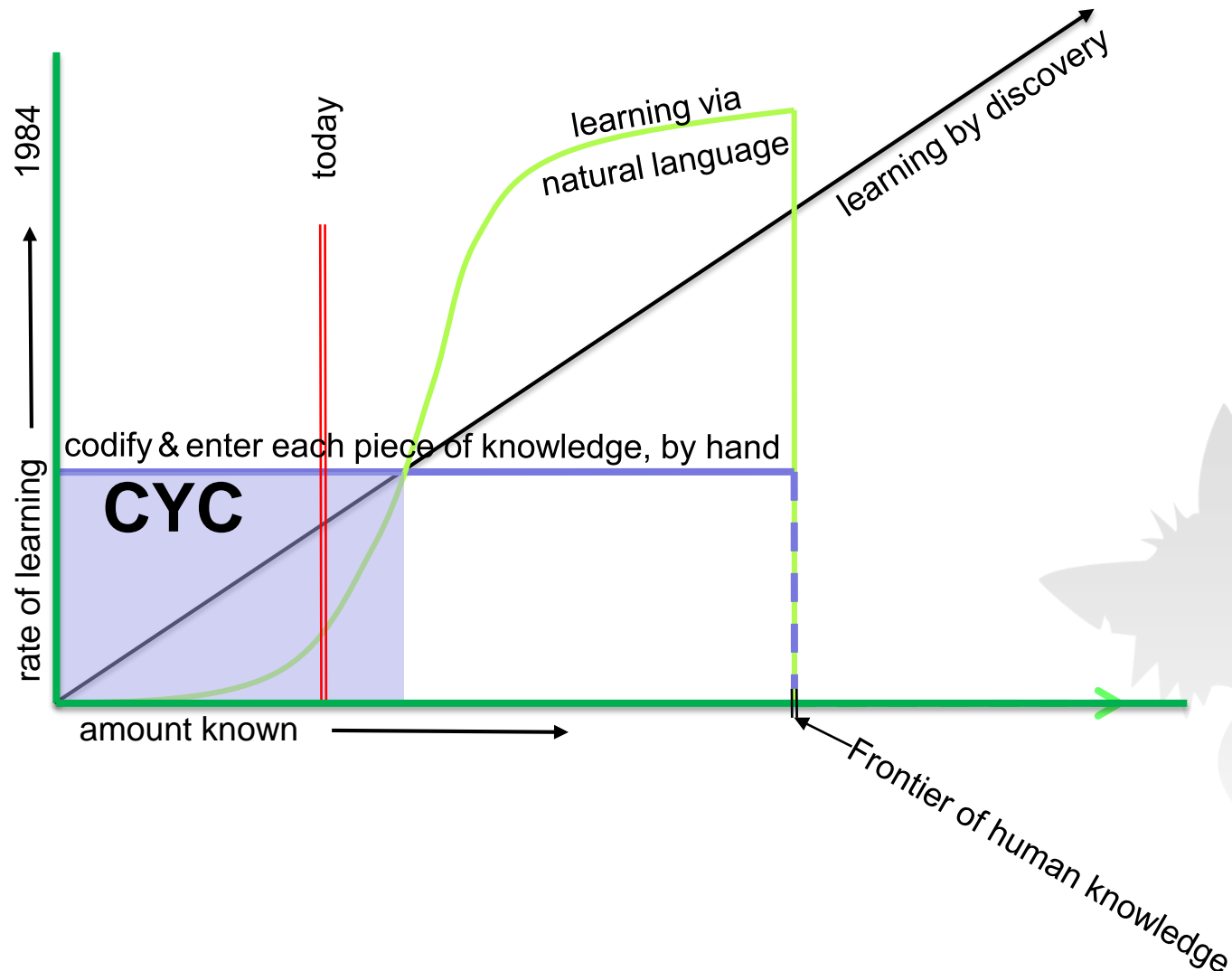
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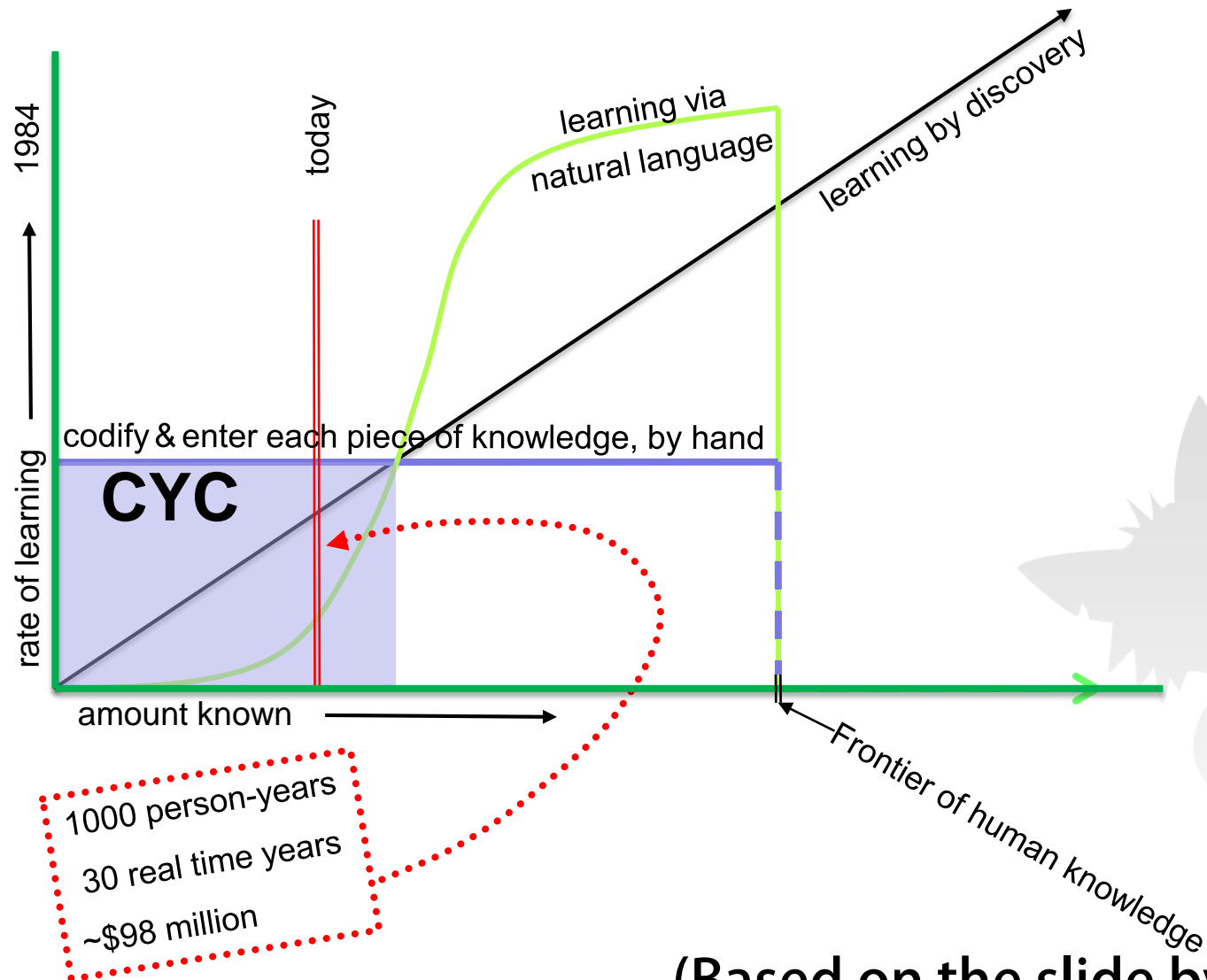
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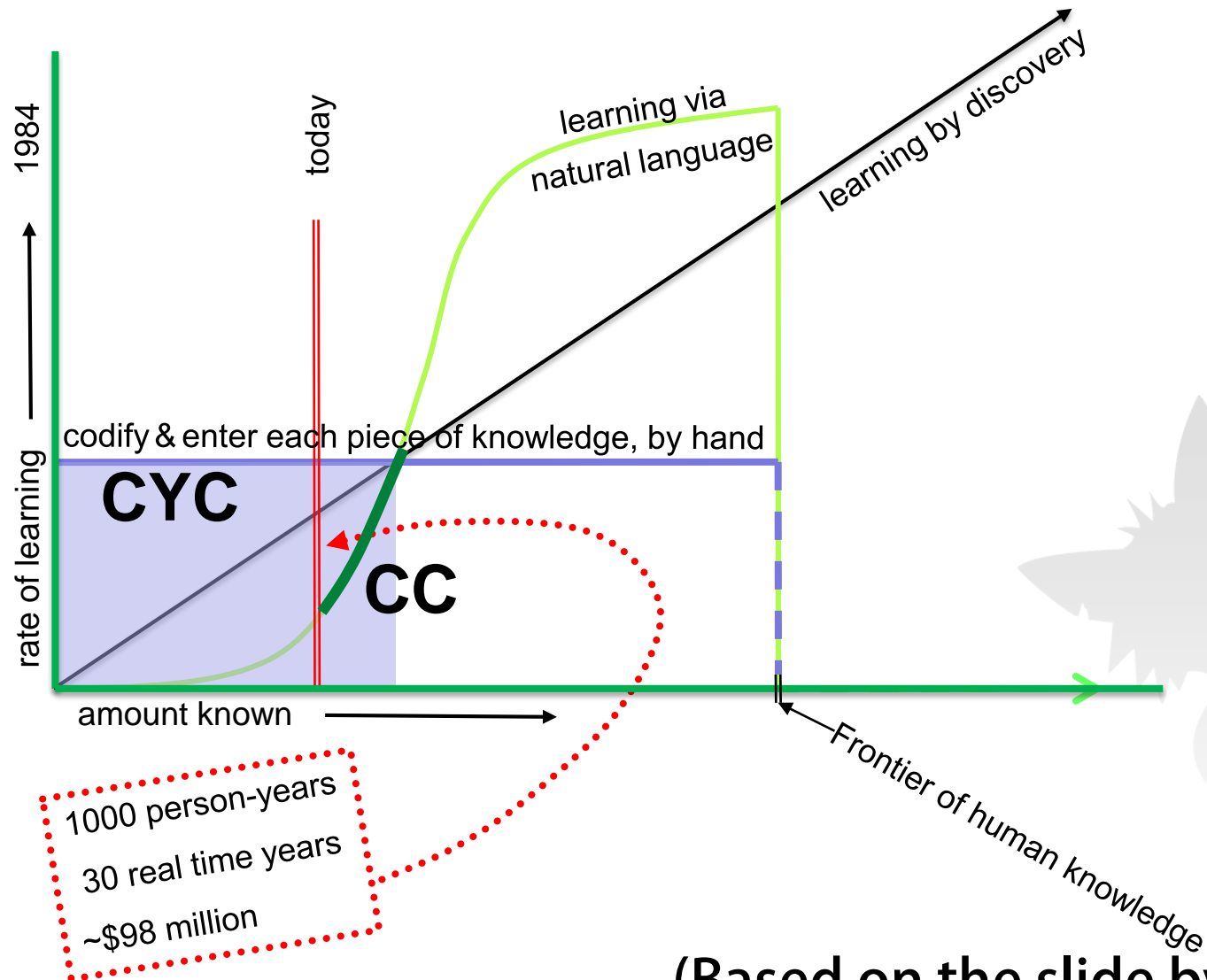
# WHAT IS BEHIND (CYC)



(Based on the slide by Doug Lenat)



# WHAT IS BEHIND (CYC)



(Based on the slide by Doug Lenat)





V

00000 Unknown location

Meaooow...!? I am alive!:)  
 Typeld: unknownID  
 Task: null  
 CycL: null

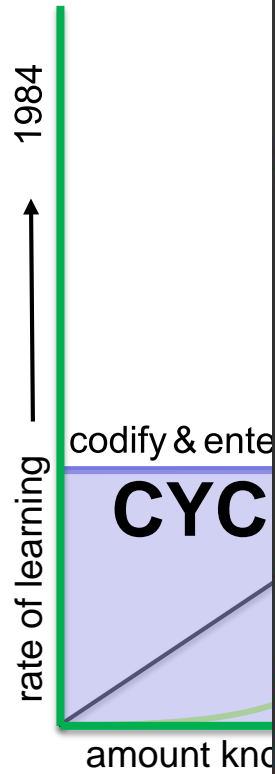
Hi there!

I am Curious Cat, and I'd like to learn to become your loyal personal assistant, and maybe a kind of friend.  
 Typeld: loginFirstScreen  
 Task: LoginTask  
 CycL: null

User: #CuriousCatUser0  
 Server: http://shodan.ijs.si:80/  
 ProphetServer/

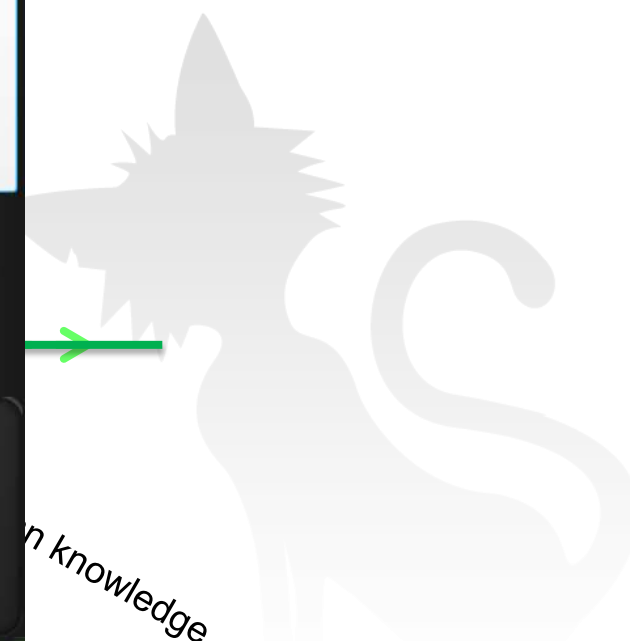
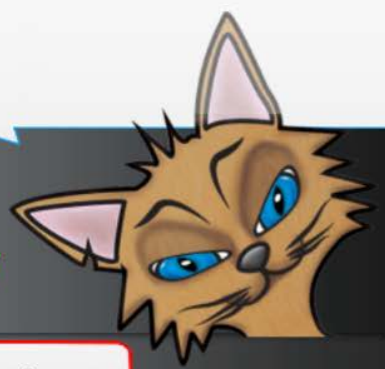
Register or Sign In

CC: These message bubbles can be scrolled.



1000 person  
 30 real time  
 ~\$98 million

ery

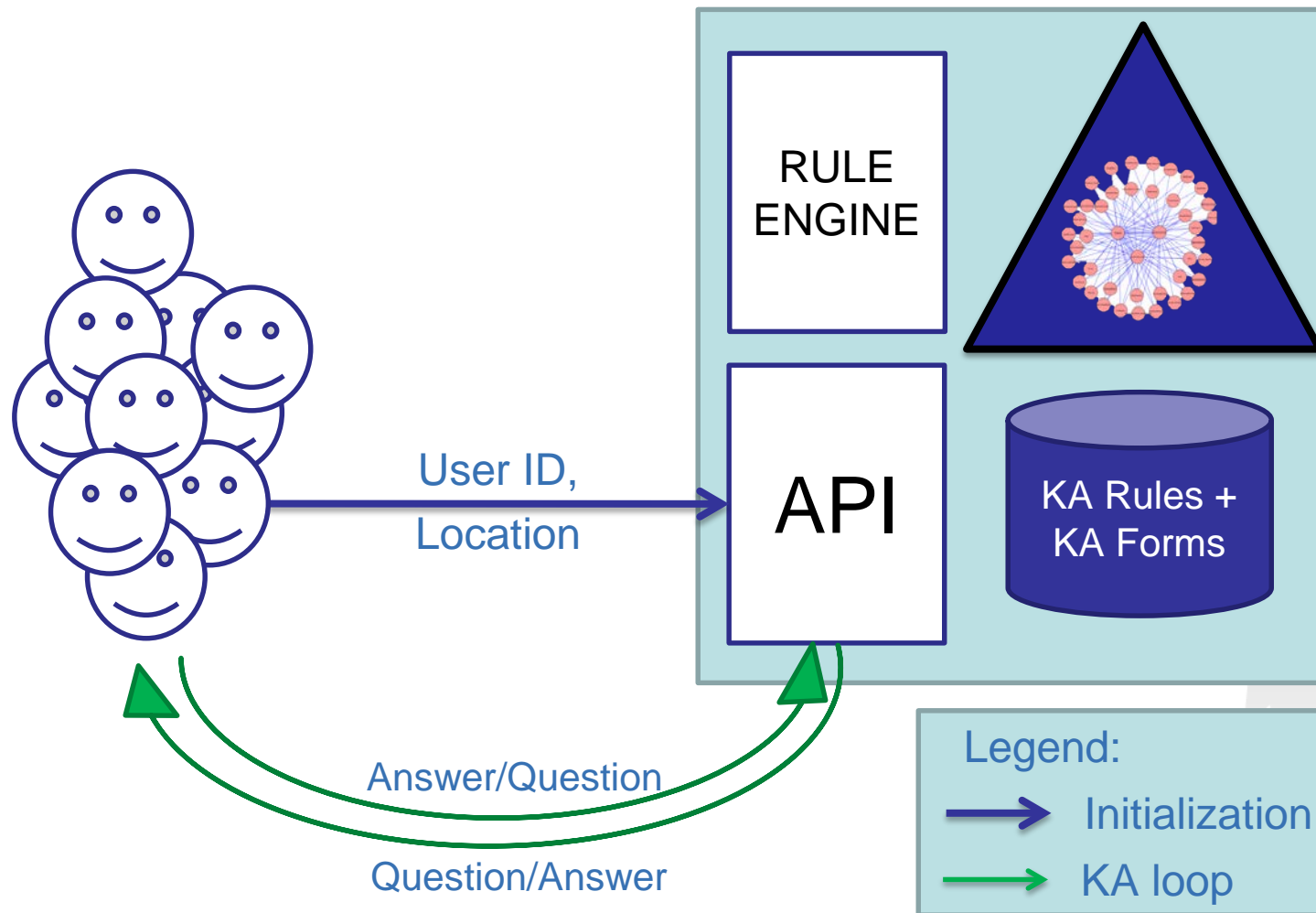


n knowledge

slide by Doug



# How we do it - Crowdsourcing



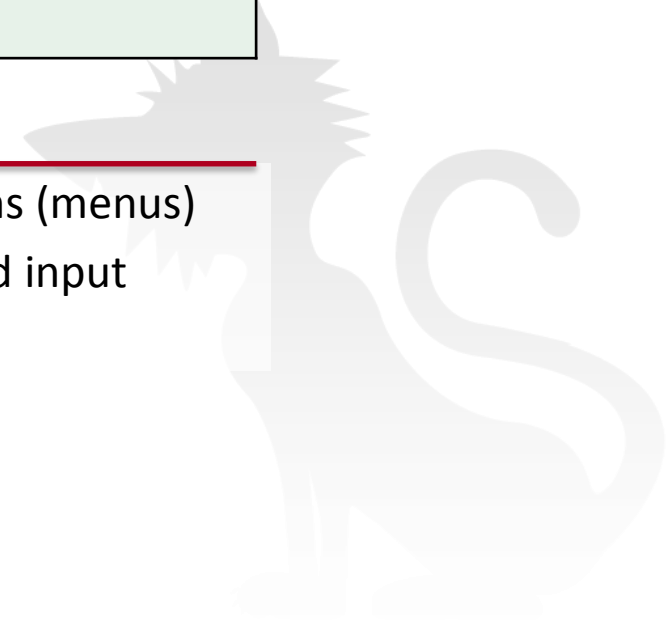


# Semantic Chat: Social Conversational Crowdsourcing

		Questions		Answers	
		Human	Machine	Human	Machine
KB					

- ←
- NL Generation (Cyc)
  - Patterns

- 
- Predefined options (menus)
  - Knowledge guided input
  - Free text input





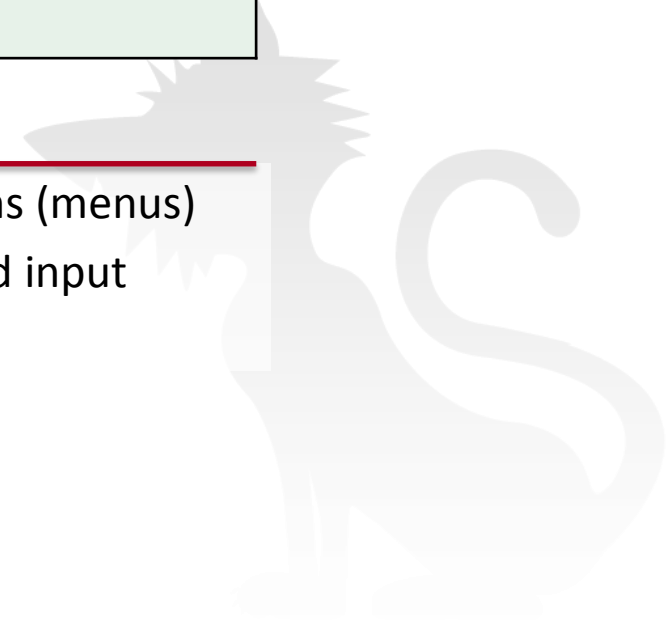
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A blue curved arrow points from the Machine cell in the Questions column to the Machine cell in the Answers column.

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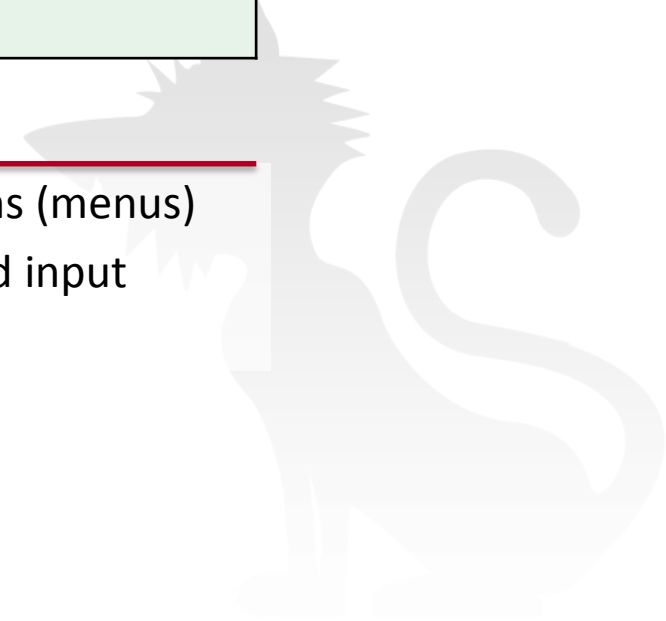


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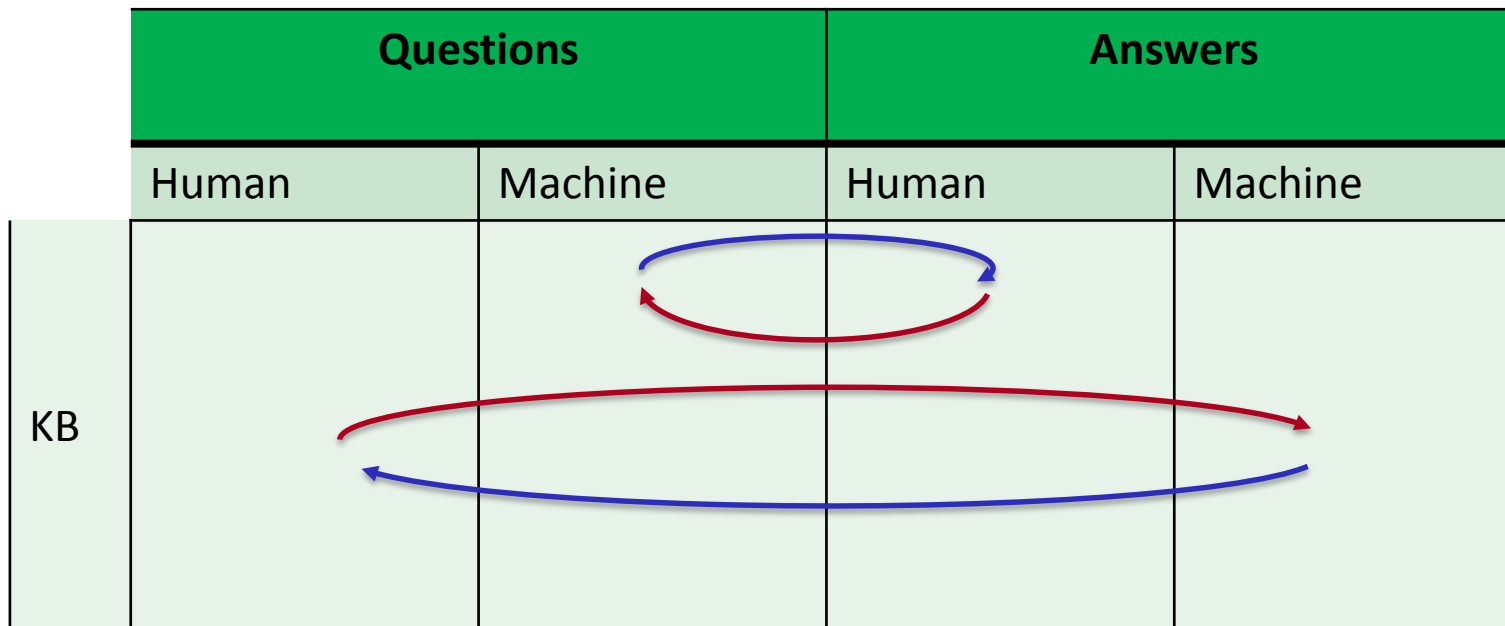
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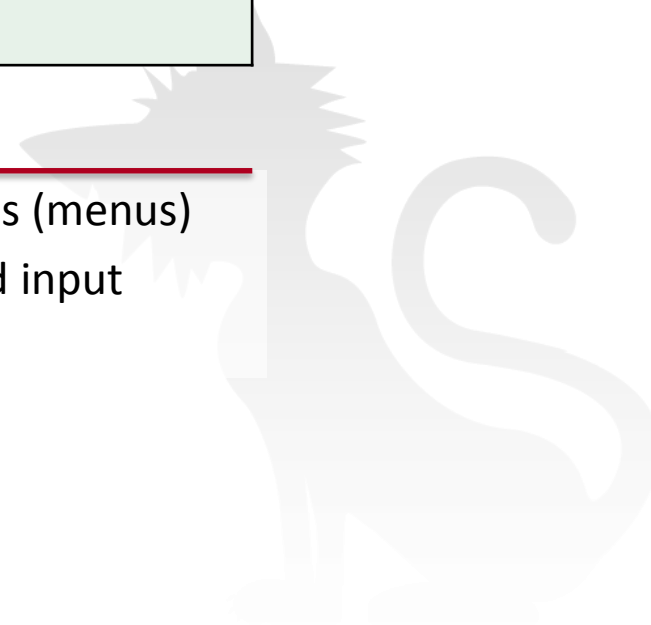


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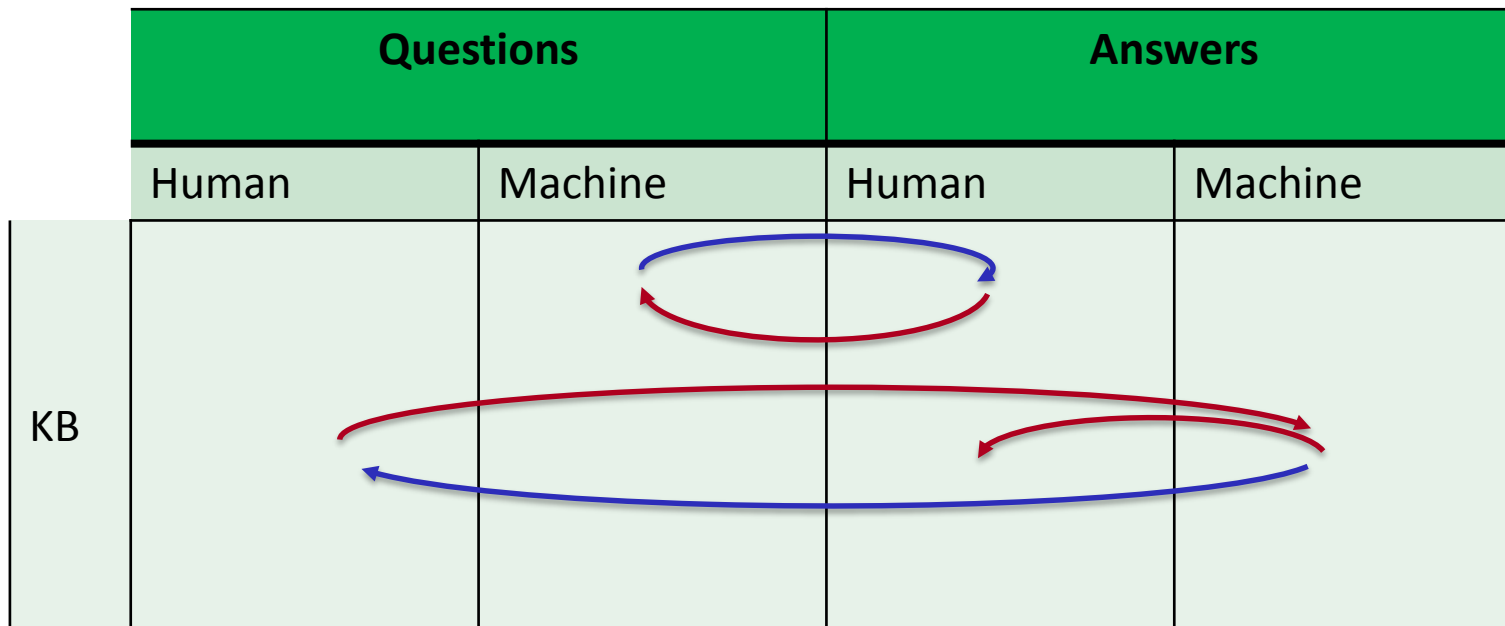
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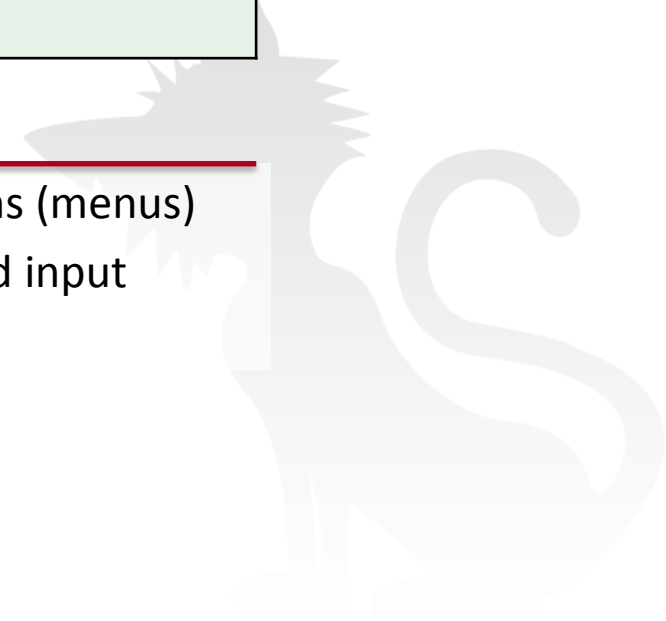


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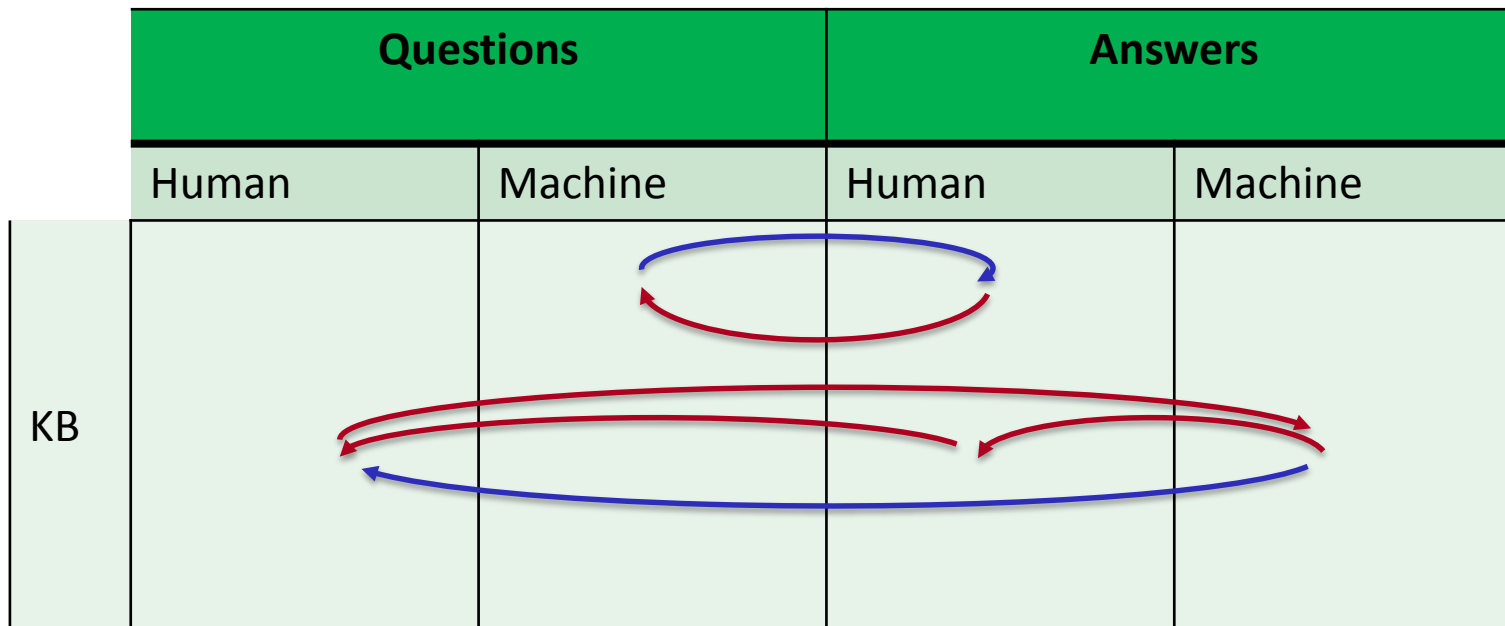
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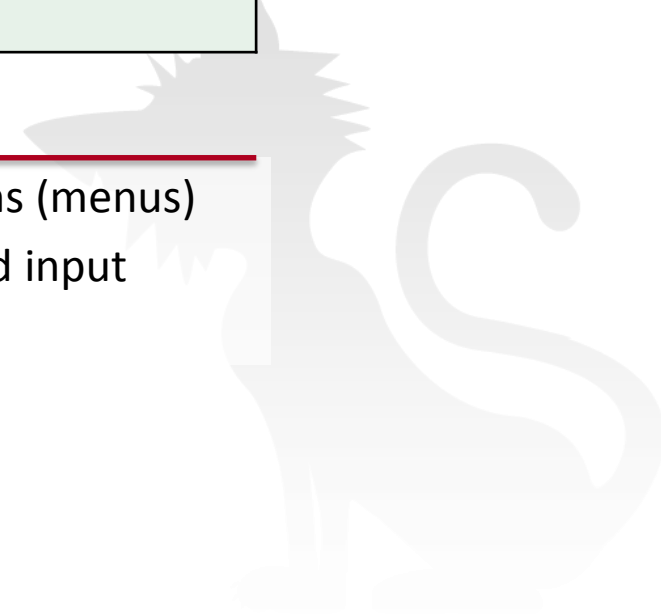


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# Levels of learning

- Learning new instances:
  - Person: Luka, Dane, Janez
- Learning new concepts
  - SlovenianPerson -> Person
- Learning new relations
  - [Person] ResidesInRegion [Region]
- Learning new rules
  - ([Person1] likes [Person2] AND [Person2] likes [Person1]) -> [Person1] friends [Person2]





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CC, Oren Etzioni et al.  
(TextRunner), Taylor M. et al. ...





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Hard to  
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Oren Etzioni et al., Luis von Ahn et  
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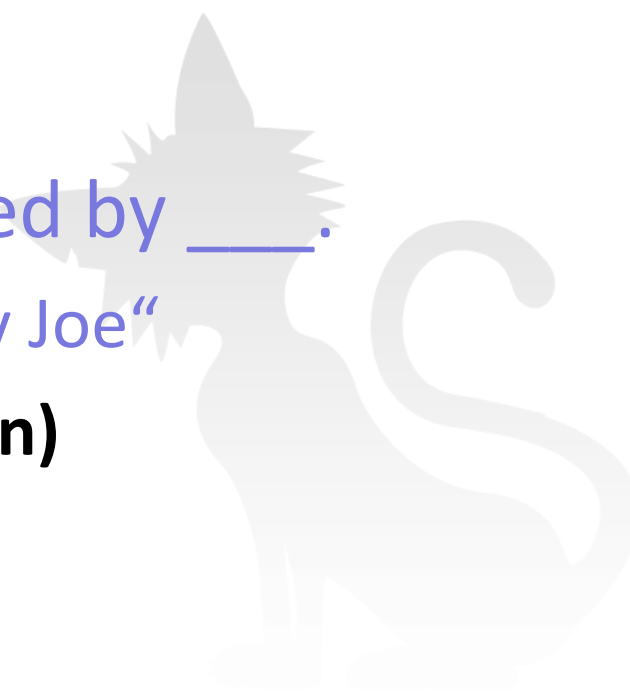
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|---------------------|---|
| Easy                | CC, Oren Etzioni et al. (TextRunner), Taylor M. et al. ...                        |
| Trickier            | CC, Huairan Lin et al., Di Iorio et al., Mitchell, T. et al., ...                 |
| Hard to do it right | Oren Etzioni et al., Luis von Ahn et al., Eckert, K. et al., Mitchell, T. et al., |
| Hard                | ?   |



# Example: Instances

- Relation: (organizationHead [Person] [Organization])
  - Arg1Isa: Person
  - Arg2Isa: Organization
  - NL: “[Org] is headed by [Person].”
- Example: Inštitut Jožef štefan is headed by \_\_\_\_.
  - User fills the pattern with i.e. „Imaginary Joe“
  - System implies: **(isa ImaginaryJoe Person)**





20229 Maybe at Haus der Werbung?

Task: OKCatActionTask  
CycL: null

Nothing  
Typeld: unknownID  
Task: null  
CycL: null

Let's continue our previous conversation about Inštitut Jožef Štefan.  
Typeld: unknownID  
Task: null  
CycL: null

Inštitut Jožef Štefan is headed by [person].  
Typeld: cureSentence  
Task: OneCureTask  
CycL: (organizationHead InstitutJozefStefan-ResearchOrganization ?Y)

User: #CuriousCatUser-1  
Server: http://shodan.ijs.si:80/  
ProphetServer/

I don't know Next Report bad question Nothing

Write here... Suppress this question Enter

Michael : Forza Coffee Company has cappuccino on the menu.

- Relation: (or [Organization]
  - Arg1Isa: Pe
  - Arg2Isa: Or
  - NL: “[Org] i
- Example: Inš
  - User fills th
  - System imp

d by \_\_\_\_.  
Joe”





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  - NL: “[Org] i
- Example: Inš
- User fills th
- System imp

20229 At Hotel President, 162min

Inštitut Jožef Štefan.

Typelid: unknownID  
Task: null  
CycL: null

Inštitut Jožef Štefan is headed by *[person]*.

Typelid: cureSentence  
Task: OneCureTask  
CycL: (organizationHead InstitutJozefStefan-ResearchOrganization ?Y)

User: #CuriousCatUser-1  
Server: http://shodan.ijs.si:80/ProphetServer/

I don't know Next Report bad question Noth

Imaginary Joe **Ok** Suppress this question

q w e r t z u i o p  
a s d f g h j k l  
↑ y x c v b n m ←  
123 Sym Slovenščina Done



d by \_\_\_\_.  
Joe“







- Relation: (or  
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20229 At Hotel President, 162min

Task: null  
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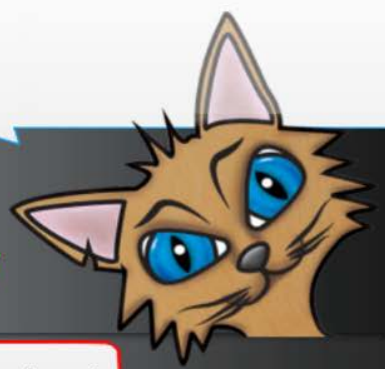
Imaginary Joe  
Typeld: unknownID  
Task: null  
CycL: null

I haven't heard of "Imaginary Joe" before. What kind of thing is it?  
Typeld: newTerm  
Task: OneCureTask  
CycL: null

User: #CuriousCatUser-1  
Server: http://shodan.ijs.si:80/  
ProphetServer/

person Go back

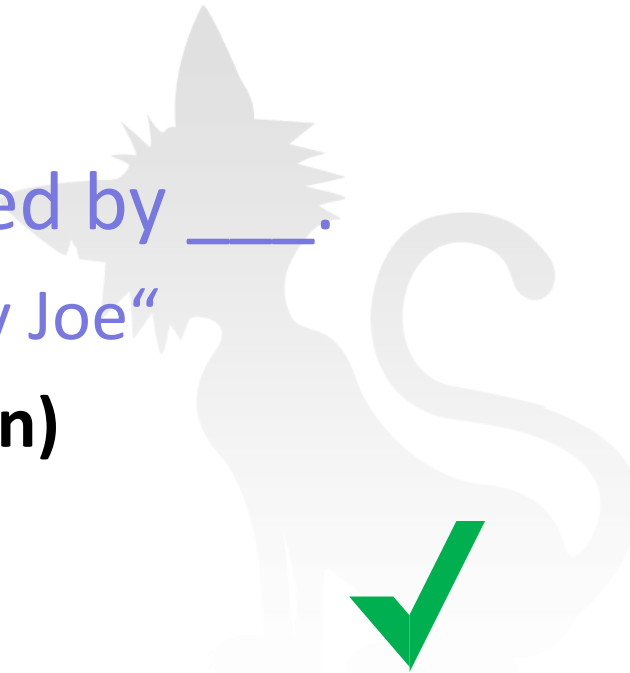
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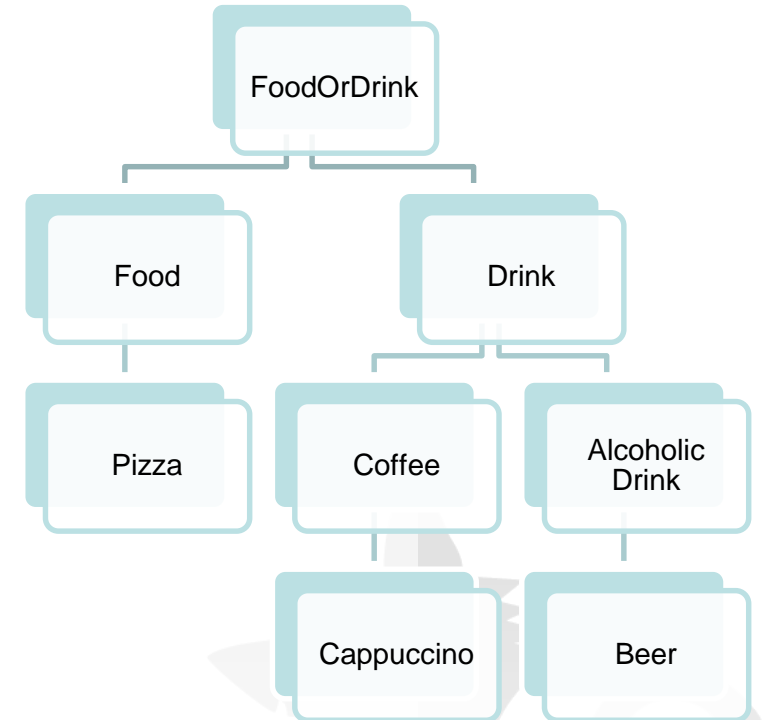
# Example: Concepts

- Relation: (havingFoodOrDrinkAtEvent ?Person ?Visit ?FoodOrDrink)

- Arg1Isa: Person
- Arg2Isa: Visit
- Arg3Genl: FoodOrDrink
- Pattern: “[Person] had [FoodOrDrink] at his [visit of place].”

- Example: Luka had \_\_\_\_ on his visit of Egoist on 18 Sept.

- Answer: Strange coffee
- System implies: (**subclass StrangeCoffee FoodOrDrink**)





23° f 3G 19:03

Curious Cat

Egoist Lounge Bar has take-away.  
The cheapest coffees with cream in the Slovenian city of Ljubljana cost 1.5 euros in Egoist Lounge Bar.  
Luka Bradeško had a coffee with milk at his or her 15:11:40, September 14, 2012 visit to Egoist Lounge Bar.

Ok

Luka Bradeško had *[food and drink]* at his or her 19:07:18, September 18, 2012 visit to Egoist Lounge Bar.

food and drink

I don't know Next Enough about (Drink)

+ Janez: Janez Starc had a coffee with milk at Janez

05023 Egoist Lounge Bar

- Relation: (having  
?Visit ?FoodOrDrink)
  - Arg1Isa: Person
  - Arg2Isa: Visit
  - Arg3Genl: FoodOrDrink
  - Pattern: “[Person] [FoodOrDrink]”
- Example: Luka Bradeško had a coffee with milk at Egoist on 18 September 2012
  - Answer: Strange
  - System implies





23° f 3G 19:03

Curious Cat

Egoist Lounge Bar has take-away.  
The cheapest [coffees with cream](#) in the [Slovenian city of Ljubljana](#) cost 1.5 euros in [Egoist Lounge Bar](#).  
[Luka Bradeško](#) had a [coffee with milk](#) at [his or her](#) 15:11:40, [September](#) 14, 2012 visit to [Egoist Lounge Bar](#).

Ok

[Luka Bradeško](#) had *[food and drink]* at [his or her](#) 19:07:18, [September](#) 18, 2012 visit to [Egoist Lounge Bar](#).

Strange Coffee

I don't know Next Enough about (Drink)

+ Janez: Janez Starc had a coffee with milk at Janez

05023 Egoist Lounge Bar

- Relation: (having  
?Visit ?FoodOrDrink)
  - Arg1Isa: Person
  - Arg2Isa: Visit
  - Arg3Genl: FoodOrDrink
  - Pattern: “[Person]  
[FoodOrDrink]”
- Example: Luka Bradeško had a coffee with milk at Egoist on 18 September 2012.
  - Answer: Strange Coffee
  - System implies

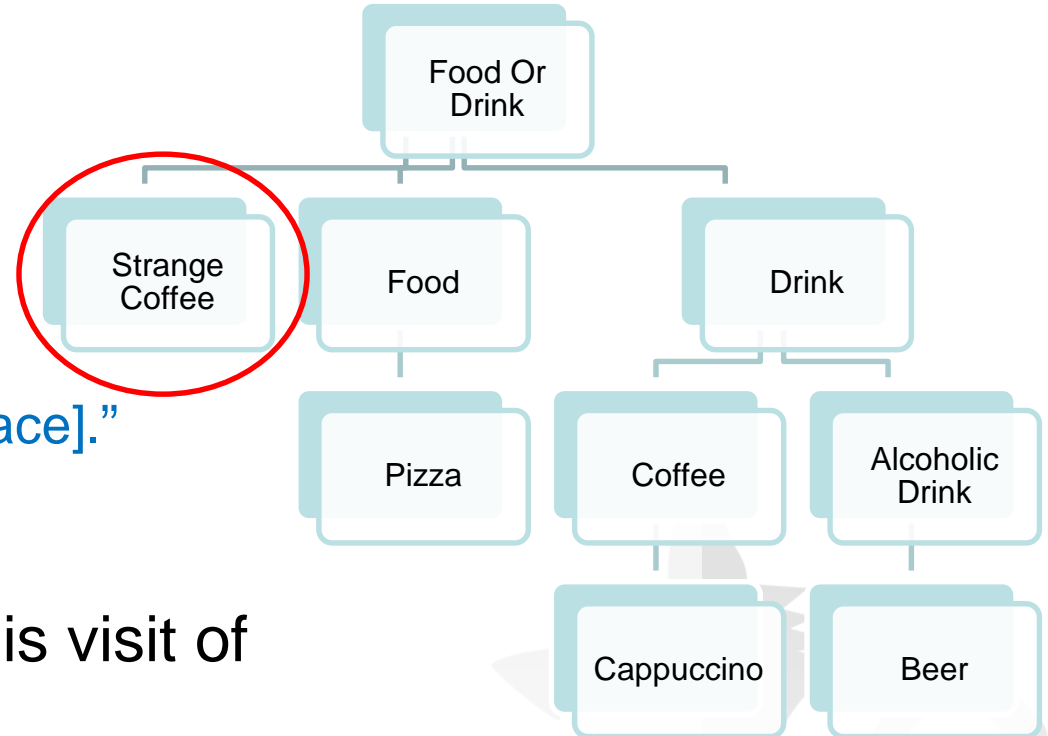




# Example: Concepts

- Relation: (havingFoodOrDrinkAtEvent ?Person ?Visit ?FoodOrDrink)

- Arg1Isa: Person
- Arg2Isa: Visit
- Arg3Genl: FoodOrDrink
- Pattern: “[Person] had [FoodOrDrink] at his [visit of place].”



- Example: Luka had \_\_\_\_ on his visit of Egoist on 18 Sept.

- Answer: Strange coffee
- System implies: (**subclass StrangeCoffee FoodOrDrink**)





# Example: Concepts

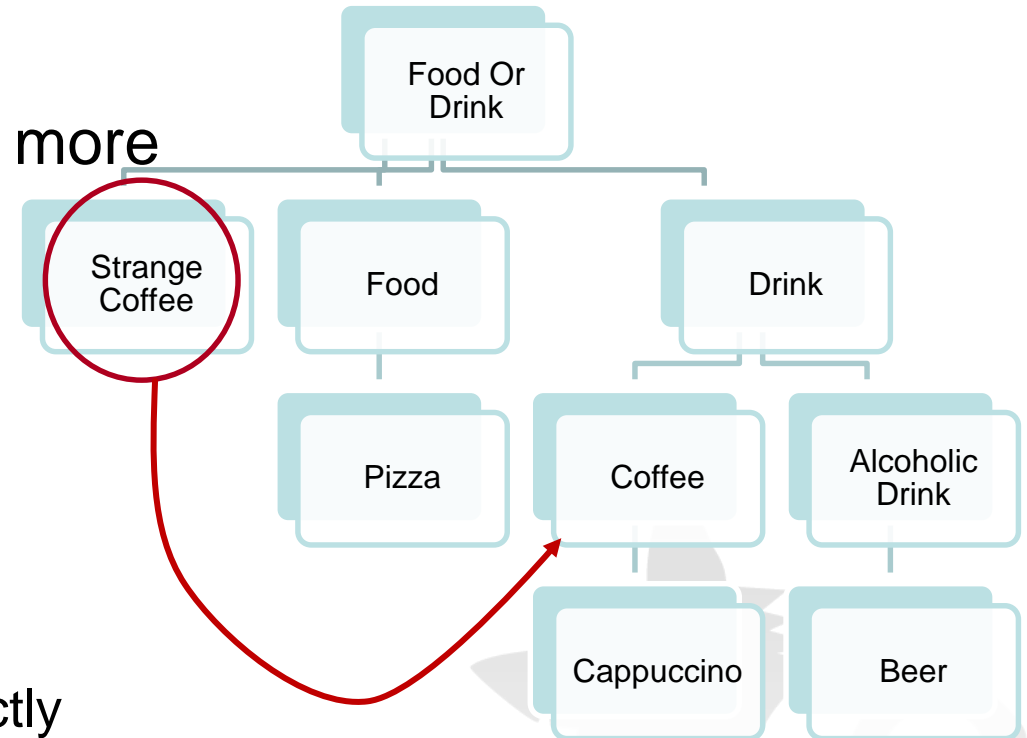
- Default positioning the graph is not accurate enough.

- Better positioning with asking more questions

- Is Strange coffee type of Drink?
- Is Strange coffee type of Coffee?

- Better positioning based on string presentation.

- Because of word “coffee” in Strange coffee we can ask directly whether it is a type of Coffee







- Default position  
enough.
- Better position  
questions
  - Is Strange coffee
  - Is Strange coffee
- Better position  
string presenta
  - Because of wo  
Strange coffee  
whether it is a

Curious Cat

Reason. I've tried for several milliseconds.

Try Again!

[Luka Bradeško](#) had *[food and drink]* at [his or her](#) 19:07:18, [September 18, 2012](#) visit to [Egoist Lounge Bar](#).

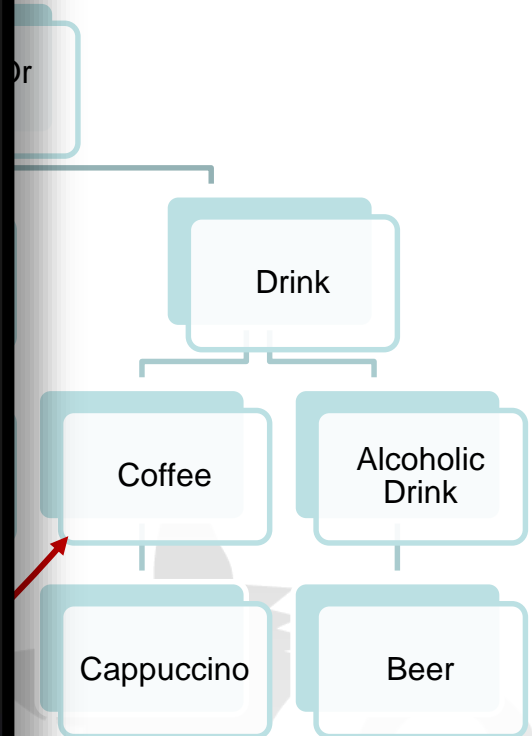
strange coffee

I don't seem to have "strange coffee" before. What kind of thing is it?

coffee food and drink type o

+ Janez: Janez Starc had a coffee with milk at Janez

05023 Egoist Lounge Bar







# How to Motivate users to teach

Many possible approaches

- Currently we are trying with making it useful for the users with acting as a personal assistant
- Points
- Providing the gained knowledge back to its users





# How to Motivate users to teach

*EXAMPLE (DEMO)*

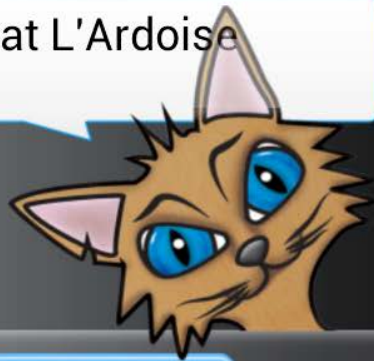


[Luka Bradesko](#) has a [Masters degree](#) in [computer science](#).  
[Luka Bradeško](#) likes [the 13th floor](#).

Kitty, can you please find out where we are?

Ok. I am trying to figure out our location. Please wait until flagman stops waving...

Where are we? Are we at L'Ardoise (2.0m)



- Yes
- No
- Nevermind

Michael: [bahn mi](#) is a [type of product](#) that is made by

07188

kopalnica



Knowledge capture and social suggestion during an SF restaurant visit by Luka Bradeško

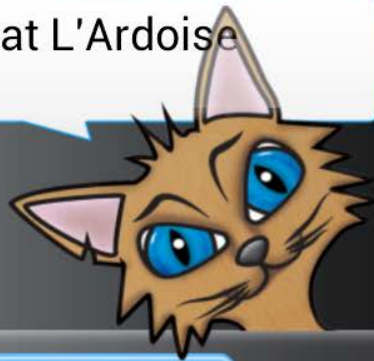


[Luka Bradesko](#) has a [Masters degree](#) in [computer science](#).  
[Luka Bradeško](#) likes [the 13th floor](#).

Kitty, can you please find out where we are?

Ok. I am trying to figure out our location. Please wait until flagman stops waving...

Where are we? Are we at L'Ardoise (2.0m)



Yes

No

Nevermind

Michael: [bahn mi](#) is a [type of product](#) that is made by

07188

kopalnica



Knowledge capture and social suggestion during an SF restaurant visit by Luka Bradeško



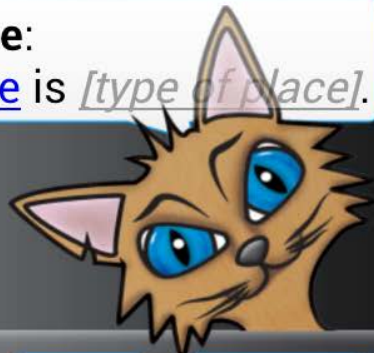
Kitty, can you please find out where we are?

Ok. I am trying to figure out our location. Please wait until flagman stops waving...

Where are we? Are we at L'Ardoise (2.0m)

Yes

L'Ardoise:  
[L'Ardoise](#) is *[type of place]*.



- type of place
- hotel
- Enough a
- airport
- bar
- restaurant
- I don't k

Michael: [bahn mi](#) is a *type of product* that is made by

07188

L'Ardoise



This is a new location to CC, so it asks about it, prompting with likely answers



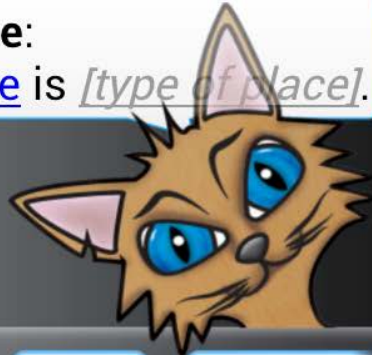
Kitty, can you please find out where we are?

Ok. I am trying to figure out our location. Please wait until flagman stops waving...

Where are we? Are we at L'Ardoise (2.0m)

Yes

L'Ardoise:  
[L'Ardoise](#) is *[type of place]*.



- type of place
- hotel
- Enough a
- airport
- bar
- restaurant**
- I don't k

Michael: [bahn mi](#) is a type of product that is made by

07188

L'Ardoise



This is a new location to CC, so it asks about it, prompting with likely answers



Ok. I am trying to figure out our location. Please wait until flagman stops waving...

Where are we? Are we at L'Ardoise (2.0m)

Yes

L'Ardoise:  
L'Ardoise is *[type of place]*.

restaurant



Michael: bahn mi is a type of product that is made by

07188

L'Ardoise



This is a new location to CC, so it asks about it, prompting with likely answers

... IS THE ONE FOR [L'Ardoise's](#) homepage.

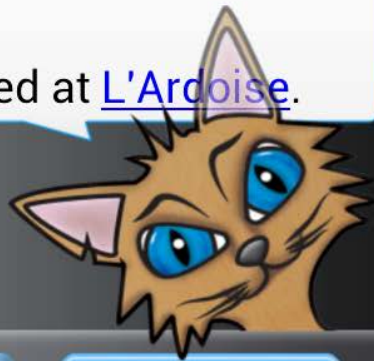
I don't know

Is music played at [L'Ardoise](#)?

Yes

Thanks for teaching me that Music is played at [L'Ardoise](#).

*[style of music]* is played at [L'Ardoise](#).



style of music



I don't know

Enough about L'Ardoise

+5

Michael: [bahn mi](#) is a [type of product](#) that is made by

07243

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.

... IS THE ONE FOR [L'Ardoise's](#) homepage.

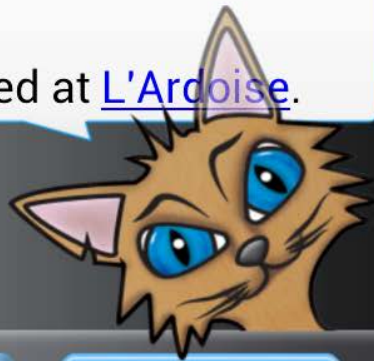
I don't know

Is music played at [L'Ardoise](#)?

Yes

Thanks for teaching me that Music is played at [L'Ardoise](#).

*[style of music]* is played at [L'Ardoise](#).



style of music



I don't know

Enough about L'Ardoise

+5

Michael: [bahn mi](#) is a [type of product](#) that is made by

07243

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.

... IS THE ONE FOR [L'Ardoise's](#) homepage.

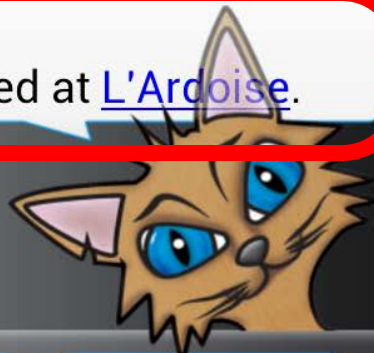
I don't know

Is music played at [L'Ardoise](#)?

Yes

Thanks for teaching me that Music is played at [L'Ardoise](#).

*[style of music]* is played at [L'Ardoise](#).



style of music



I don't know

Enough about L'Ardoise

+5

Michael: [bahn mi](#) is a [type of product](#) that is made by

07243

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.



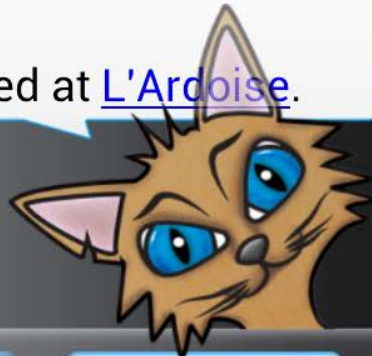
I don't know

Is music played at [L'Ardoise](#)?

Yes

Thanks for teaching me that Music is played at [L'Ardoise](#).

*[style of music]* is played at [L'Ardoise](#).



Ethno ambient

Ok

I don't know



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.

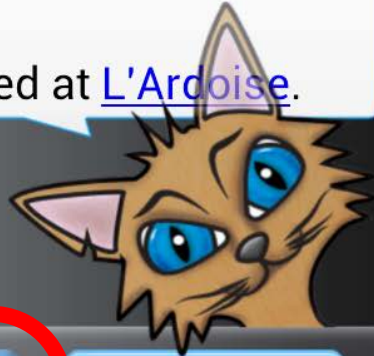
I don't know

Is music played at [L'Ardoise](#)?

Yes

Thanks for teaching me that Music is played at [L'Ardoise](#).

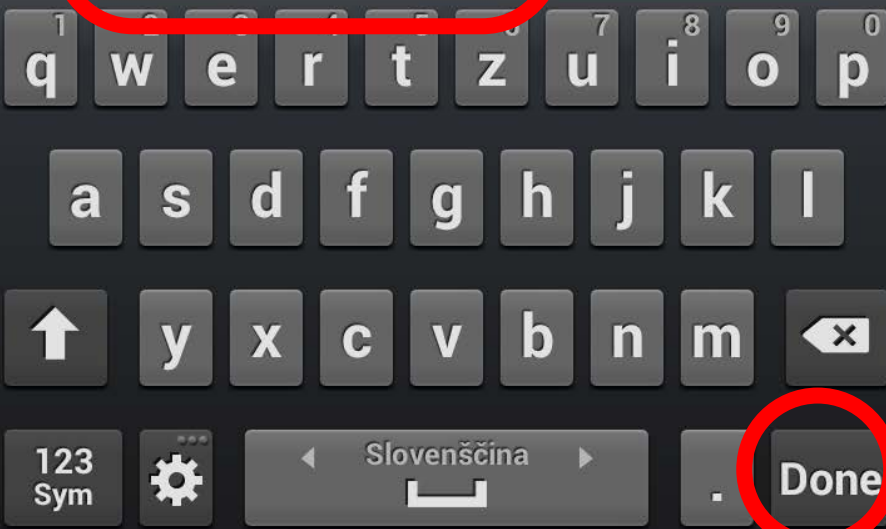
*[style of music]* is played at [L'Ardoise](#).



Ethno ambient

Ok

I don't know



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.



is music played at [L'Ardoise](#)?

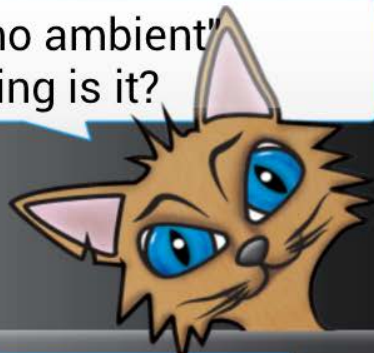
Yes

Thanks for teaching me that Music is played at [L'Ardoise](#).

*[style of music]* is played at [L'Ardoise](#).

Ethno ambient

I haven't heard of "Ethno ambient" before. What kind of thing is it?



style of music

Let me repeat

Michael: [bahn mi](#) is a [type of product](#) that is made by

07243

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.

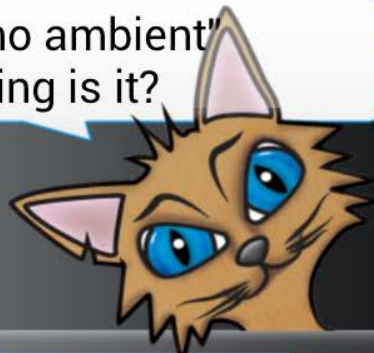
is music played at L'Ardoise?

Yes

Thanks for teaching me that Music is played at L'Ardoise.  
*[style of music]* is played at L'Ardoise.

Ethno ambient

I haven't heard of "Ethno ambient" before. What kind of thing is it?



style of music

Let me repeat

Michael: bahn mi is a type of product that is made by

07243

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.

Thanks for teaching me that Music is played at [L'Ardoise](#).

*[style of music]* is played at [L'Ardoise](#).

Ethno ambient

I haven't heard of "Ethno ambient" before. What kind of thing is it?

style of music



Copied to clipboard

Michael: [balm](#) is a type of product that is made by

07243

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.

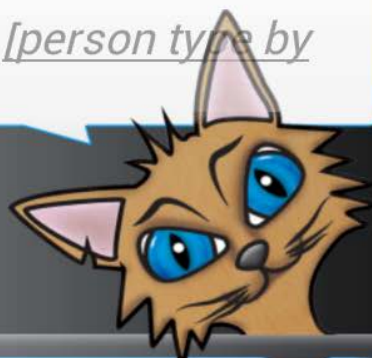
Ethno ambient

I haven't heard of "Ethno ambient" before. What kind of thing is it?

style of music

Thanks for teaching me that [Ethno ambient](#) is played at [L'Ardoise](#).

[L'Ardoise](#) is friendly to *[person type by eating habits]*.



person type by eating habits



vegetarian

vegan

human with celi

Michael: [bahn mi](#) is a type of product that is made by

07248

L'Ardoise



Because it knows what a restaurant is, it can ask relevant questions... and understand the answers.



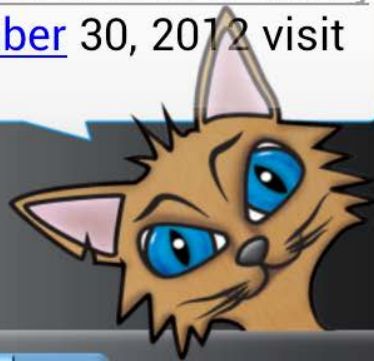
style of music

Thanks for teaching me that [Ethno ambient](#) is played at [L'Ardoise](#).

[L'Ardoise](#) is friendly to *[person type by eating habits]*.

I don't know

[Luka Bradeško](#) had *[item of food or drink]* at [its](#) 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#).



I don't know

Enough about L'Ardoise

Michael: [bahn mi](#) is a [type of product](#) that is made by

07248

L'Ardoise



Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

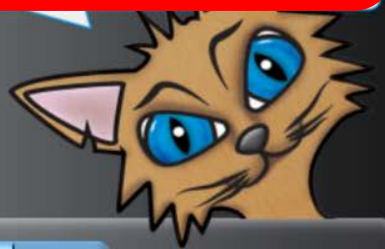
style of music

Thanks for teaching me that [Ethno ambient](#) is played at [L'Ardoise](#).

[L'Ardoise](#) is friendly to *[person type by eating habits]*.

I don't know

[Luka Bradeško](#) had *[item of food or drink]* at [its](#) 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#).



I don't know

Enough about L'Ardoise

Michael: [bahn mi](#) is a [type of product](#) that is made by

07248

L'Ardoise



Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

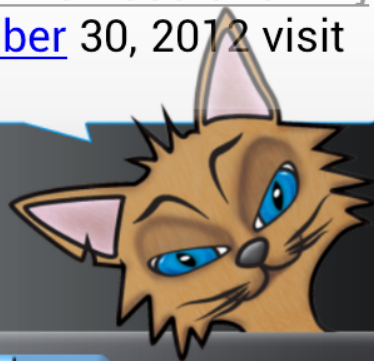


Thanks for teaching me that [Ethno ambient](#) is played at [L'Ardoise](#).

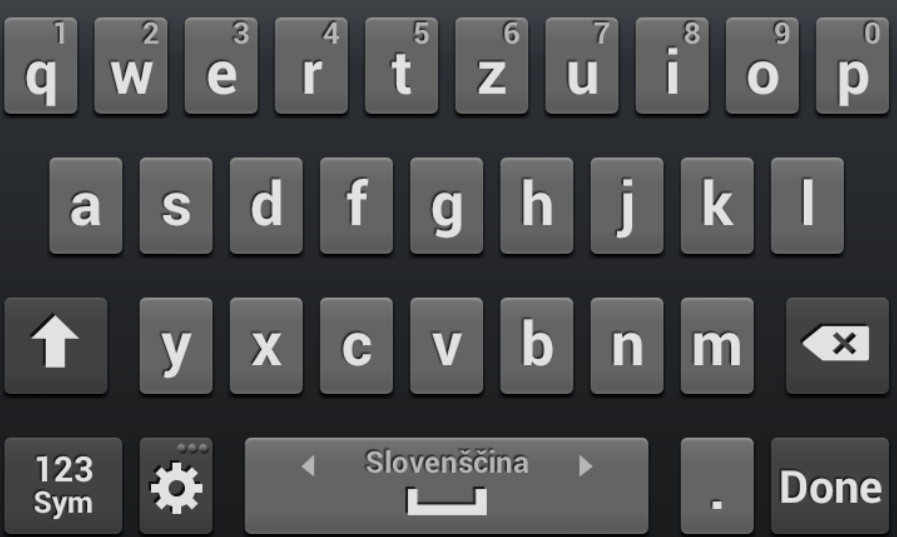
[L'Ardoise](#) is friendly to *[person type by eating habits]*.

I don't know

[Luka Bradeško](#) had *[item of food or drink]* at its 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#).



traditional duck Ok

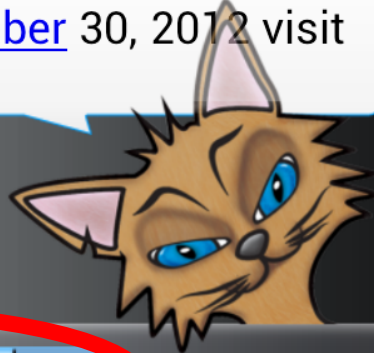


Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

Thanks for teaching me that [Ethno ambient](#) is played at [L'Ardoise](#).  
[L'Ardoise](#) is friendly to *[person type by eating habits]*.

I don't know

[Luka Bradeško](#) had *[item of food or drink]* at [its](#) 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#).



traditional duck Ok

q w e r t z u i o p

a s d f g h j k l

↑ y x c v b n m ↵

123 Sym ⚙️ Slovenščina Done

Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

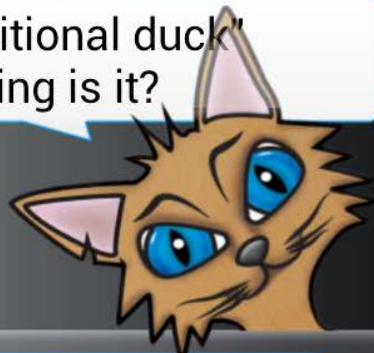
L'Ardoise is friendly to *[person type by eating habits]*.

I don't know

Luka Bradeško had *[item of food or drink]* at its 03:14:25, September 30, 2012 visit to L'Ardoise.

traditional duck

I haven't heard of "traditional duck" before. What kind of thing is it?



duck meat

item of food or drink

type of dish

Let me repeat

Michael: bahn mi is a type of product that is made by



Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

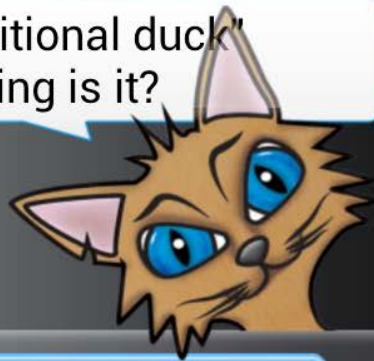
L'Ardoise is friendly to *[person type by eating habits]*.

I don't know

Luka Bradeško had *[item of food or drink]* at its 03:14:25, September 30, 2012 visit to L'Ardoise.

traditional duck

I haven't heard of "traditional duck" before. What kind of thing is it?



duck meat

item of food or drink

type of dish

Let me repeat

Michael: bahn mi is a type of product that is made by



Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

I don't know

[Luka Bradeško](#) had *[item of food or drink]* at its 03:14:25, [September 30, 2012](#) visit to [L'Ardoise](#).

traditional duck

I haven't heard of "traditional duck" before. What kind of thing is it?

duck meat



Michael: [bahn mi](#) is a [type of product](#) that is made by

07248

L'Ardoise



Including, of course, what Luka ate. this is useful for learning about the world, and for learning about Luka

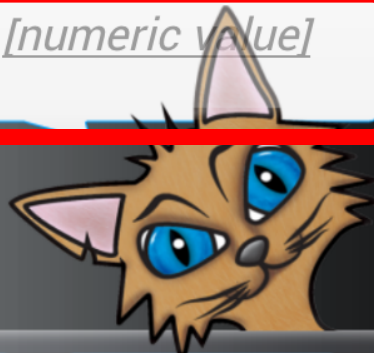


I haven't heard of "traditional duck" before. What kind of thing is it?

duck meat

Thanks for teaching me that [Luka Bradeško](#) had a [traditional duck](#) at [its](#) 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#).

[Traditional ducks](#) cost *[numeric value]* dollars at [L'Ardoise](#).



numeric value



I don't know

Enough about L'Ardoise

+5

Michael: [bahn mi](#) is a [type of product](#) that is made by

07253

L'Ardoise



Understanding the answer, again, drives a useful, conversational follow-ups. In this case, it asks about the price

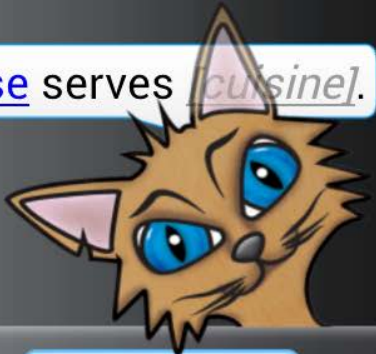
Thanks for teaching me that Traditional ducks cost 21 dollars at L'Ardoise.  
Is it true that: "L'Ardoise has traditional ducks on the menu."?

Yes

Is L'Ardoise a self-service restaurant?

I don't know

L'Ardoise serves cuisine.



cuisine



I don't know

Enough about L'Ardoise

Michael: bahn mi is a type of product that is made by

07259

L'Ardoise



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users

Thanks for teaching me that traditional ducks cost 21 dollars at L'Ardoise.

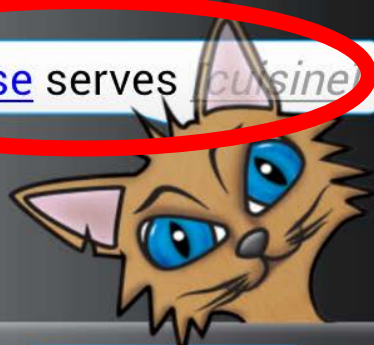
Is it true that: "L'Ardoise has traditional ducks on the menu."?

Yes

Is L'Ardoise a self-service restaurant?

I don't know

L'Ardoise serves *cuisine*



cuisine



I don't know

Enough about L'Ardoise

Michael: bahn mi is a type of product that is made by

07259

L'Ardoise



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users

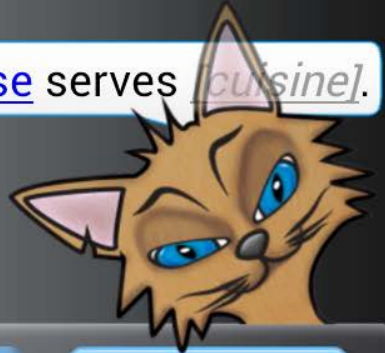
Is it true that: "L'Ardoise has traditional ducks on the menu."?

Yes

Is L'Ardoise a self-service restaurant?

I don't know

L'Ardoise serves cuisine.



French cuisine | Ok | I don't know



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users



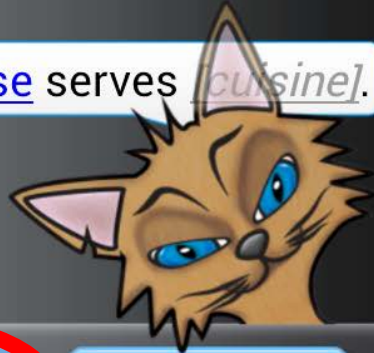
Is it true that: "L'Ardoise has traditional ducks on the menu."?

Yes

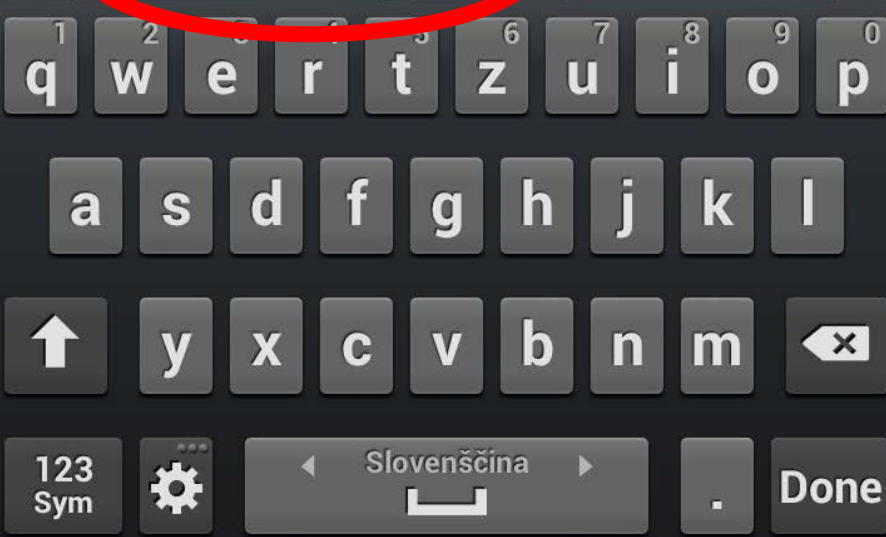
Is L'Ardoise a self-service restaurant?

I don't know

L'Ardoise serves cuisine.



French cuisine | **Ok** | I don't know



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users



Is L'Ardoise a self-service restaurant?

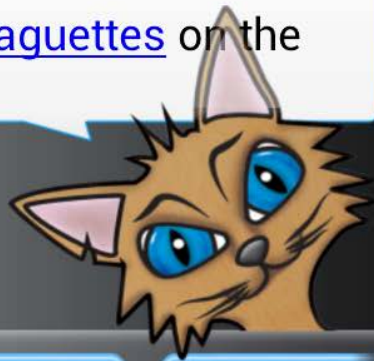
I don't know

L'Ardoise serves [cuisine].

French cuisine

Thanks for teaching me that L'Ardoise serves French food.

Does L'Ardoise have baguettes on the menu?



Yes

No

I don't know

Enough al

+5

Michael: bahn mi is a type of product that is made by

07264

L'Ardoise



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users

Is L'Ardoise a self-service restaurant?

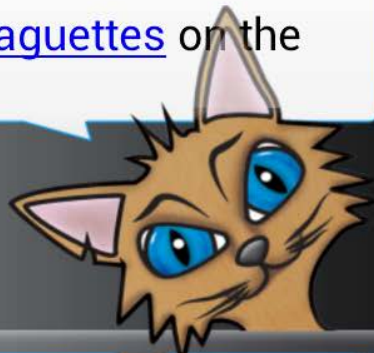
I don't know

L'Ardoise serves [cuisine].

French cuisine

Thanks for teaching me that L'Ardoise serves French food.

Does L'Ardoise have baguettes on the menu?



- Yes
- No
- I don't know
- Enough al

+5

Michael: bahn mi is a type of product that is made by

07264

L'Ardoise



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users

Is L'Ardoise a self-service restaurant?

I don't know

L'Ardoise serves *[cuisine]*.

French cuisine

Thanks for teaching me that L'Ardoise serves French food.

Does L'Ardoise have baguettes on the menu?



Yes

No

I don't know

Enough al

+5

Michael: bahn mi is a type of product that is made by

07264

L'Ardoise



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users

Is L'Ardoise a self-service restaurant?

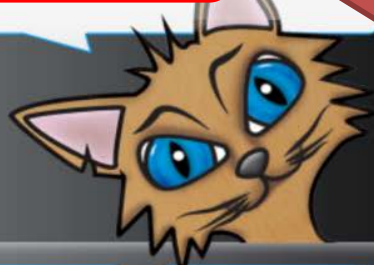
I don't know

L'Ardoise serves *[cuisine]*.

French cuisine

Thanks for teaching me that L'Ardoise serves French food.

Does L'Ardoise have baguettes on the menu?



Yes No I don't know Enough al

+5

Michael: bahn mi is a type of product that is made by

07264

L'Ardoise



It stores everything it learns in a user-specific context in its knowledge base, and can use it to help other users

Why is it asking Luka about baguettes? It's because it learned from another user that they're a common part of French cuisine, and that's what L'Ardoise serves



# Easy to Add New Places, Events



Curious Cat

Where are we? Are we at Village Underground (6.0m)

No

Where are we then?

Blue Note

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01398 Blue Note

Curious Cat

September 27, 2012 visit to Blue Note together with [person].

Next

Blue Note is [type of place].

bar

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01398 Blue Note

Curious Cat

\_\_\_\_\_ is the URL for Blue Note's homepage.

Next

Is Blue Note a live music venue?

Yes

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01403 Blue Note

Curious Cat

Thanks for teaching me that Blue Note is a live music venue.

[name of a musical performance] is the name of the live musical performance at Blue Note.

Late Night Groove

Pick among the bubbles below

name of a musical performance

Luka: Luka Bradeško likes soccer.

01408 Blue Note

Curious Cat

name of a musical performance

Thanks for teaching me that The Late Night Groove is the name of the live musical performance at Blue Note.

[musical performer] is playing in the Late Night Groove at Blue Note.

musical performer

I don't know Next Enough ab

Luka: Luka Bradeško likes soccer.

01413 Blue Note

Curious Cat

Thanks for teaching me that Harry Belafonte is playing in the Late Night Groove at Blue Note.

The date of the Late Night Groove at Blue Note is [date].

16 October 2012

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01418 Blue Note

Curious Cat

Thanks for teaching me that The Late Night Groove at Blue Note will occur on October 16, 2012.

[style of music] will be played on the Late Night Groove at Blue Note.

Jazz

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01423 Blue Note



# Easy to Add New Places, Events



Where are we? Are we at Village Underground (6.0m)

No

Where are we then?

Blue Note

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01398 Blue Note

September 27, 2012 visit to [Blue Note](#) together with [\[person\]](#).

Next

[Blue Note](#) is [\[type of place\]](#).

bar

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01398 Blue Note

\_\_\_\_\_ is the URL for [Blue Note's](#) homepage.

Next

Is [Blue Note](#) a [live music venue](#)?

Yes

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01402 Blue Note

Thanks for teaching me that [Blue Note](#) is a [live music venue](#).

[\[name of a musical performance\]](#) is the name of the live musical performance at [Blue Note](#).

Late Night Groove

Pick among the bubbles below

Luka: Luka Bradeško likes soccer.

01408 Blue Note

name of a musical performance

Thanks for teaching me that [The Late Night Groove](#) is the name of the live musical performance at [Blue Note](#).

[\[musical performer\]](#) is playing in [the Late Night Groove](#) at [Blue Note](#).

musical performer

I don't know Next Enough about

Luka: Luka Bradeško likes soccer.

01412 Blue Note

Thanks for teaching me that [Harry Belafonte](#) is playing in [the Late Night Groove](#) at [Blue Note](#).

The date of [the Late Night Groove](#) at [Blue Note](#) is [\[date\]](#).

16 October 2012

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01418 Blue Note

Thanks for teaching me that [The Late Night Groove](#) at [Blue Note](#) will occur on [October](#) 16, 2012.

[\[style of music\]](#) will be played on [the Late Night Groove](#) at [Blue Note](#).

Jazz

Please pick the bubble below

Luka: Luka Bradeško likes soccer.

01423 Blue Note

[Janez Starc](#) likes [\[style of music\]](#).

Jazz

I also know that [Jazz music](#) will be played on [the Late Night Groove](#) at [Blue Note](#).

person

I don't know Next Enough about

Luka: Luka Bradeško likes soccer.

01433 Blue Note

Can we talk about the [Late Night Groove](#) a bit?

**the Late Night Groove:**  
[The Late Night Groove](#) at [Blue Note](#) will occur on [October](#) 16, 2012.  
[The Late Night Groove](#) at [Blue Note](#) happens in [Blue Note](#).  
[Jazz music](#) will be played on [the Late Night Groove](#) at [Blue Note](#).  
[Harry Belafonte](#) will be playing in [the Late Night Groove](#) at [Blue Note](#).

Please pick the bubble below

Luka: Luka Bradeško likes dubstep.

01433 Blue Note

**the Late Night Groove:**  
[The Late Night Groove](#) at [Blue Note](#) will occur on [October](#) 16, 2012.  
[The Late Night Groove](#) at [Blue Note](#) happens in [Blue Note](#).  
[Jazz music](#) will be played on [the Late Night Groove](#) at [Blue Note](#).  
[Harry Belafonte](#) will be playing in [the Late Night Groove](#) at [Blue Note](#).

Please pick the bubble below

Luka: Luka Bradeško likes dubstep.

01433 Blue Note

# Helpful, Engaged Reasoning



14° 02:42

Curious Cat

Cappuccino costs *[numeric value]* euros at Egoist Lounge Bar.

1.1

I also know that The cheapest cappuccino in the Slovenian city of Ljubljana costs 0.9 euros in Caffe Famel.

Luka Bradeško did its 02:24:58, October 1, 2012 visit to Egoist Lounge Bar together with *[person]*.

person I don't know

No one else Enough about Egoist Lou

Janez: bread costs 5 euros at Dunajska Pekarna.

07882 Egoist Lounge Bar

14° 02:44

Curious Cat

Luka Bradeško had *[item of food or drink]* at its 02:48:32, October 1, 2012 visit to Caffe Famel.

cappuccino

Thanks for teaching me that Luka Bradeško had cappuccino at its 02:48:32, October 1, 2012 visit to Caffe Famel.

Does Luka Bradeško prefer the cappuccino at Caffe Famel over the cappuccino at Egoist Lounge Bar?

Yes No I don't know Enough al

Janez: bread costs 5 euros at Dunajska Pekarna.

07897 Caffe Famel

# Can suggest things proactively



19989 At lukas home, 1 min

What would you like me to do for you?  
Task: OKCatActionTask  
CycL: null

Restaurants  
Task: null  
CycL: null

**I think you should maybe experience [Hot Horse](#).**

**because:** [Hot Horse](#) serves [fast food cuisines](#), and is a [fast food restaurant](#). You like [fried food](#). [Hot Horse](#) has [french fries](#) on the menu.

Dist: [2 kilometers](#). Score: 8,32  
Task: OKCatActionTask  
CycL: null

User: #CuriousCatUser0  
Server: http://shodan.ijs.si:80/ProphetServer/

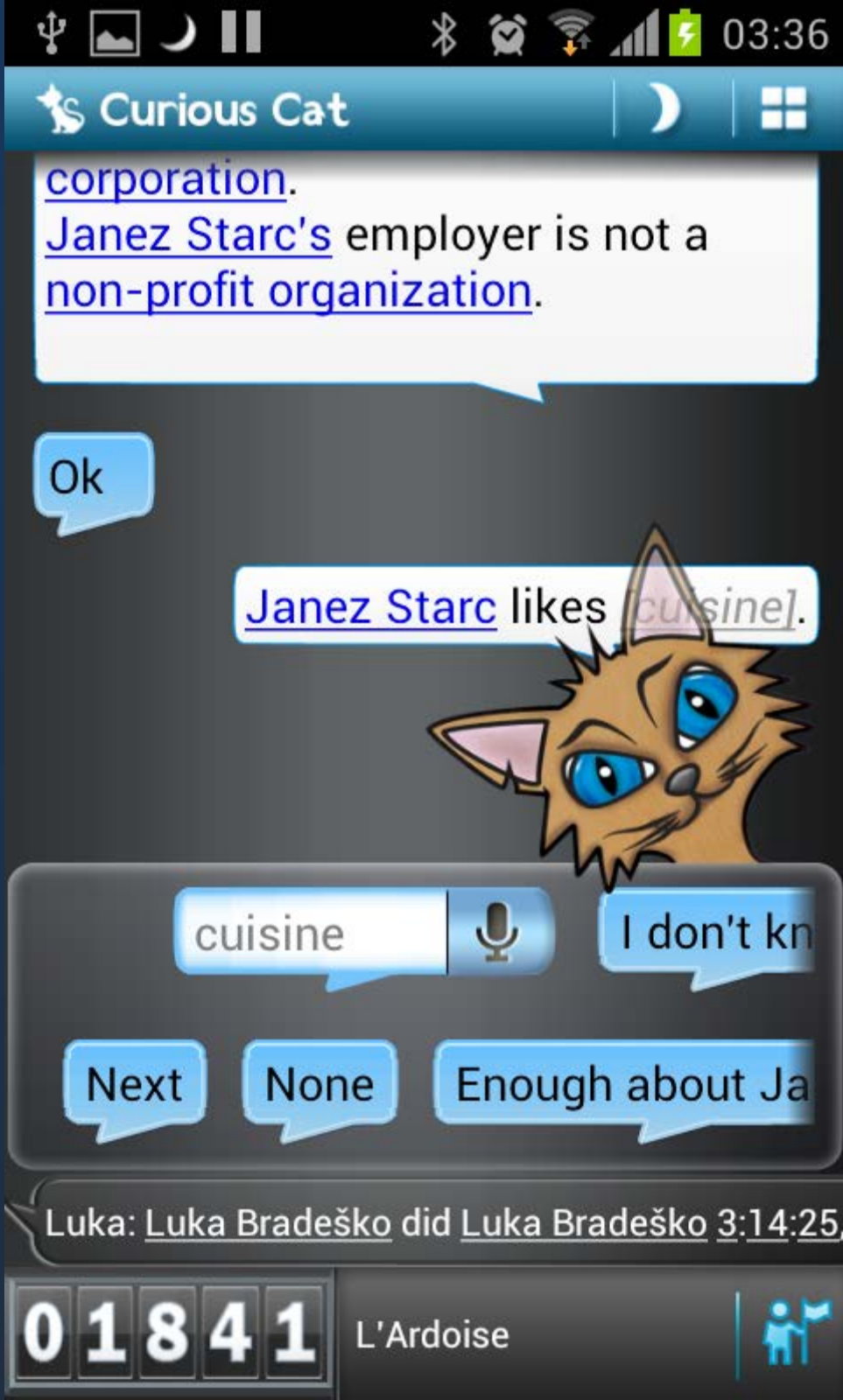
Ok

system. Earth is located in the solar system. Far E

**Janez Starc,**  
a friend of Luka:  
CC wants to  
know about its  
users so it asks him what  
things he likes.







Janez Starc,  
a friend of Luka:  
CC wants to  
know about its  
users so it asks him what  
things he likes.

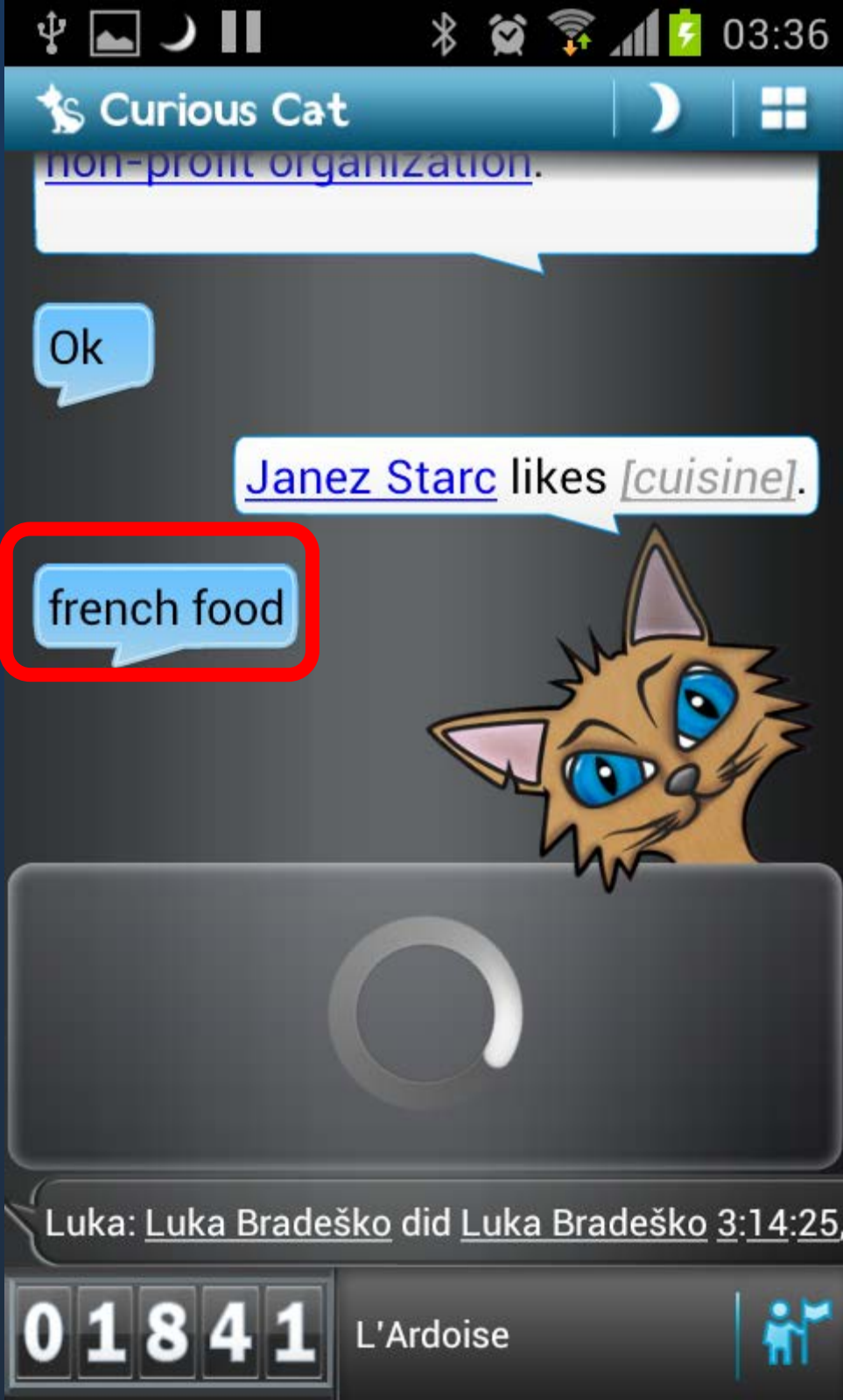






Janez Starc,  
a friend of Luka:  
CC wants to  
know about its  
users so it asks him what  
things he likes.





Janez Starc,  
a friend of Luka:  
CC wants to  
know about its  
users so it asks him what  
things he likes.

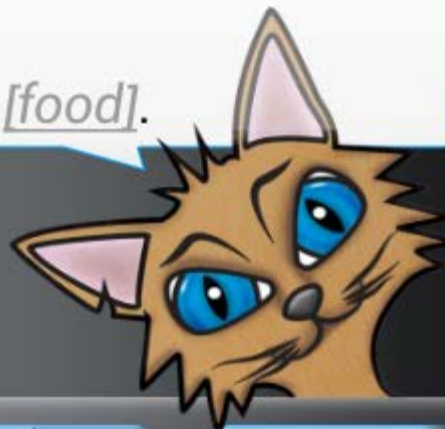


Janez Starc likes *[cuisine]*.

french food

I also know that L'Ardoise serves French food.

Janez Starc likes *[food]*.



food



I don't kn

Next

None

Enough about Ja

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01846

L'Ardoise



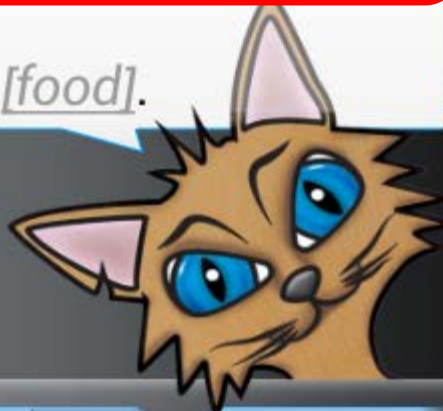
It understands that he likes French food, and suggests the nearby French place it learned about from Luka

Janez Starc likes *[cuisine]*.

french food

I also know that L'Ardoise serves French food.

Janez Starc likes *[food]*.



food



I don't kn

Next

None

Enough about Ja

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01846

L'Ardoise



It understands that he likes French food, and suggests the nearby French place it learned about from Luka

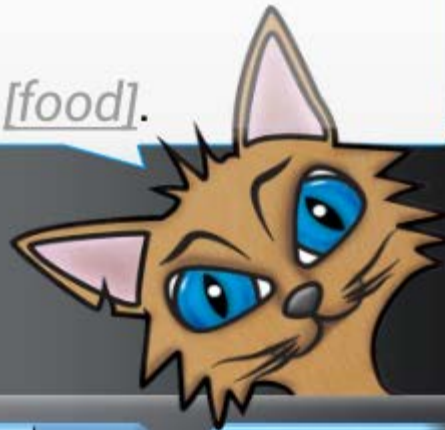


Janez Starc likes *[cuisine]*.

french food

I also know that L'Ardoise serves French food.

Janez Starc likes *[food]*.



food



I don't kn

Next

None

Enough about Ja

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01846

L'Ardoise



Janez is interested, so he selects L'Ardoise

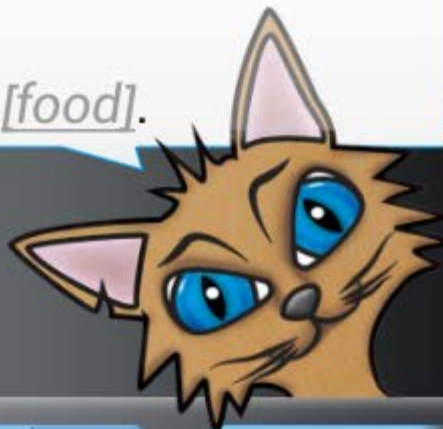


Janez Starc likes *[cuisine]*.

french food

I also know that L'Ardoise serves French food.

Janez Starc likes *[food]*.



food



I don't kn

Next

None

Enough about Ja

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01846

L'Ardoise



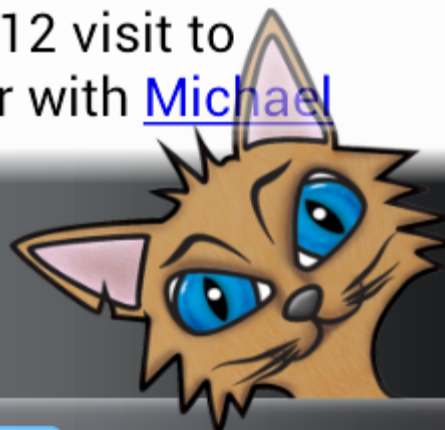
Janez is interested, so he selects L'Ardoise

**L'Ardoise:**

[Ethno ambient](#) is played at [L'Ardoise](#).

[L'Ardoise](#) is a good place to [have lunch](#).

[Luka Bradeško](#) did [its](#) 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#) together with [Michael Witbrock](#).



Ok

Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25,

01846

L'Ardoise



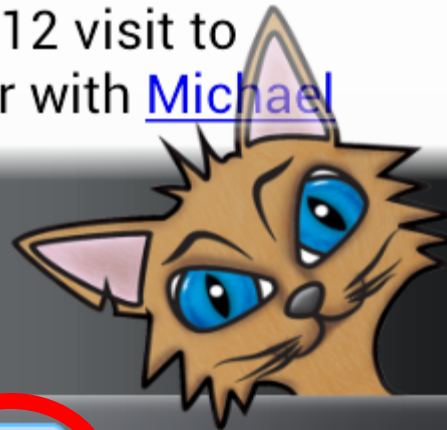
Curious Cat tells him about it, automatically generating NL content from its knowledge base

**L'Ardoise:**

[Ethno ambient](#) is played at [L'Ardoise](#).

[L'Ardoise](#) is a good place to [have lunch](#).

[Luka Bradeško](#) did [its](#) 03:14:25, [September](#) 30, 2012 visit to [L'Ardoise](#) together with [Michael Witbrock](#).



Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25,

01846

L'Ardoise

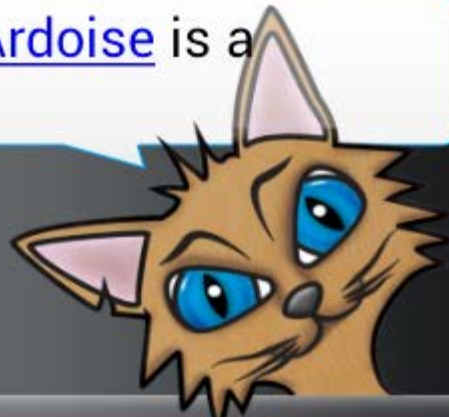


Curious Cat tells him about it, automatically generating NL content from its knowledge base

L'Ardoise does not have snail on the menu.

Ok

Is it true that: "L'Ardoise is a restaurant."?



Yes

No

I don't know

Next

Enough about L'Ardoise

Luka: Luka Bradeško did Luka Bradeško 3:14:25

01846

L'Ardoise



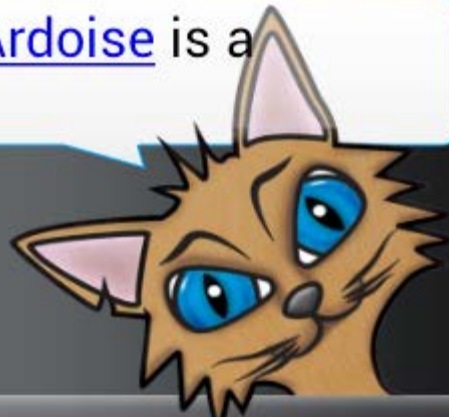
Since individual users, like Luka, may be unreliable or make mistakes, CC tries to get independent verification



L'Ardoise does not have snail on the menu.

Ok

Is it true that: "L'Ardoise is a restaurant."?



Yes

No

I don't know

Next

Enough about L'Ardoise

Luka: Luka Bradeško did Luka Bradeško 3:14:25

01846

L'Ardoise



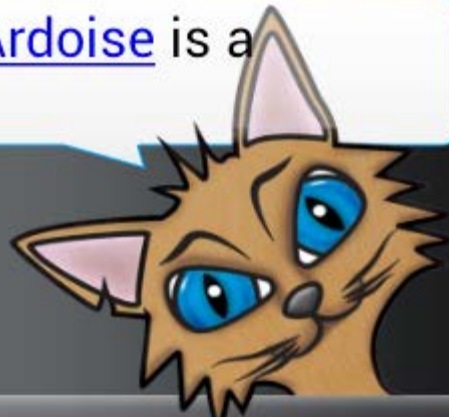
Since individual users, like Luka, may be unreliable or make mistakes, CC tries to get independent verification



L'Ardoise does not have snail on the menu.

Ok

Is it true that: "L'Ardoise is a restaurant."?



Yes

No

I don't know

Next

Enough about L'Ardoise

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01846

L'Ardoise

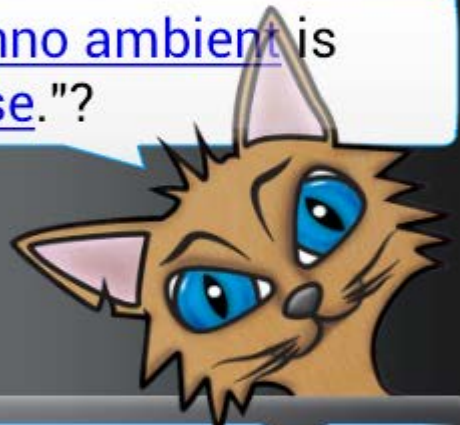


Since individual users, like Luka, may be unreliable or make mistakes, CC tries to get independent verification

Is it true that: "[L'Ardoise](#) is a restaurant."?

Yes

Is it true that: "[Ethno ambient](#) is played at [L'Ardoise](#)."?



Yes

No

I don't know

Next

Enough about L'Ardoise

Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25

01847

L'Ardoise



Is it true that: "[L'Ardoise](#) is a restaurant."?

Yes

Is it true that: "[Ethno ambient](#) is played at [L'Ardoise](#)."?



Yes

No

I don't know

Next

Enough about L'Ardoise

Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25

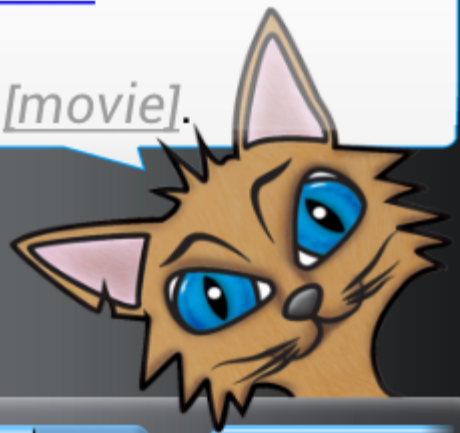
01847

L'Ardoise



pop music

Thanks for teaching me that [Janez Starc](#) likes [pop music](#).  
[Janez Starc](#) likes *[movie]*.



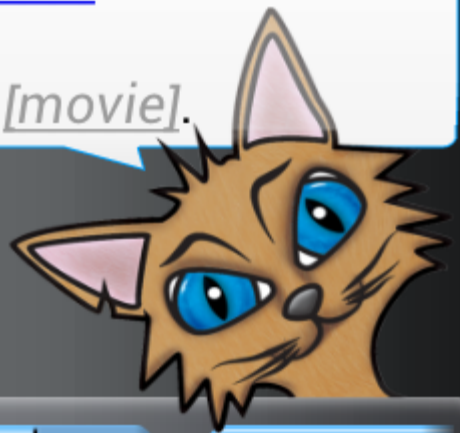
movie I don't kn



Curious Cat integrates finding out about a user in a way that makes it compelling and sticky into a natural conversation; and that makes positive, revenue-generating interactions possible

pop music

Thanks for teaching me that [Janez Starc](#) likes [pop music](#).  
[Janez Starc](#) likes *[movie]*.



13th floor | Ok | I don't kn

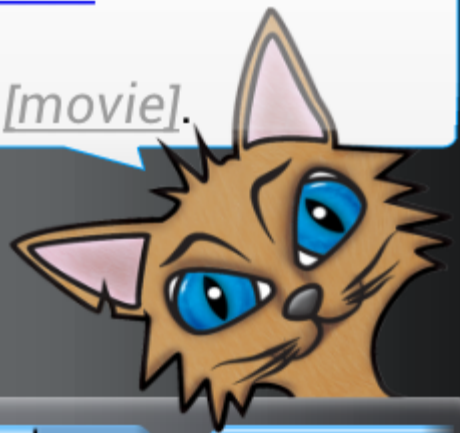


Curious Cat integrates finding out about a user in a way that makes it compelling and sticky into a natural conversation; and that makes positive, revenue-generating interactions possible

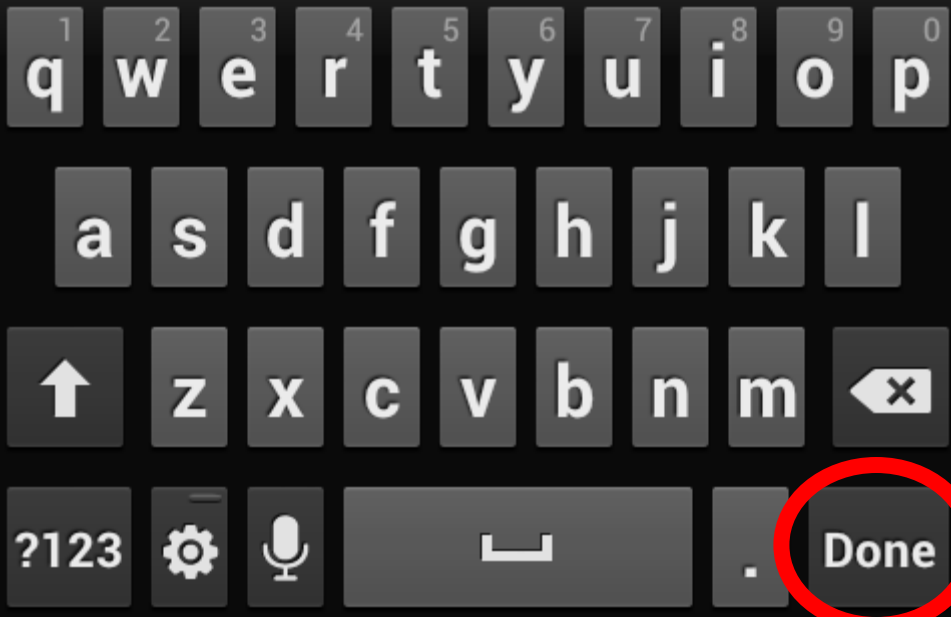


pop music

Thanks for teaching me that [Janez Starc](#) likes [pop music](#).  
[Janez Starc](#) likes *[movie]*.



13th floor | Ok | I don't kn



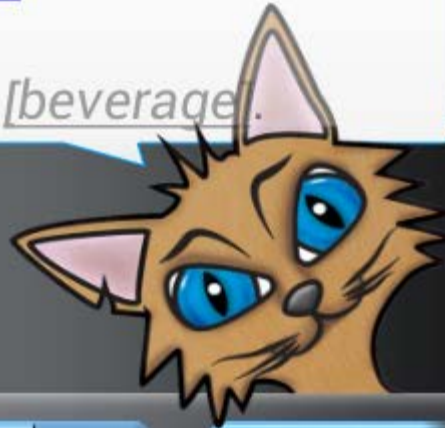
Curious Cat integrates finding out about a user in a way that makes it compelling and sticky into a natural conversation; and that makes positive, revenue-generating interactions possible

Janez Starc likes [movie].

13th floor

I also know that Luka Bradeško likes the 13th floor.

Janez Starc likes [beverage].



beverage



I don't kn

Next

None

Enough about Ja

+5

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01862

L'Ardoise



It does this in a way that uses and enhances social connections

03:40

Curious Cat

Janez Starc likes *[movie]*.

13th floor

I also know that [Luka Bradeško](#) likes [the 13th floor](#).

Janez Starc likes *[beverage]*.

beverage | I don't kn

Next None Enough about Ja

+5

Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25,

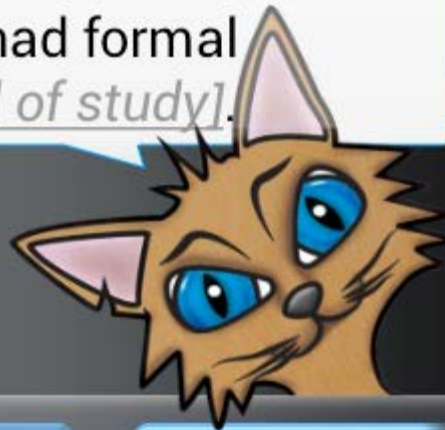
01862 L'Ardoise

It does this in a way that uses and enhances social connections

Tennis

Thanks for teaching me that [Janez Starc](#) has expert knowledge about [tennis](#).

[Janez Starc](#) has had formal education in *[field of study]*.



field of study



I don't know

Next

Enough about Janez Starc

Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25,

01872

L'Ardoise



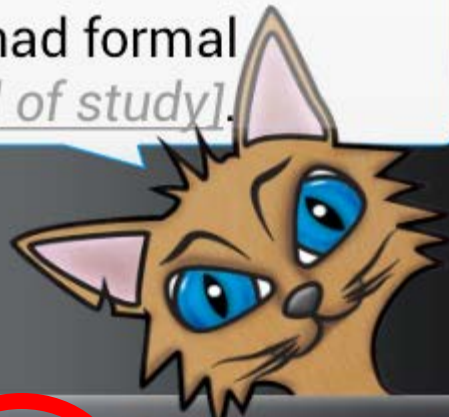
And it can interact with the user via gesture, typing and speech to capture knowledge



Tennis

Thanks for teaching me that [Janez Starc](#) has expert knowledge about [tennis](#).

[Janez Starc](#) has had formal education in *[field of study]*.



field of study



I don't know

Next

Enough about Janez Starc

Luka: [Luka Bradeško](#) did [Luka Bradeško](#) 3:14:25

01872

L'Ardoise



And it can interact with the user via gesture, typing and speech to capture knowledge

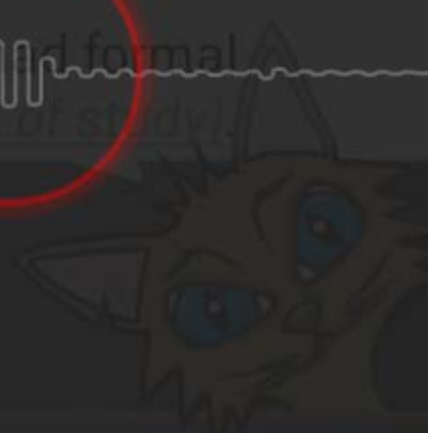


Working



Thanks for teaching me that Janez Starc has expert knowledge about tennis.

Janez Starc has had formal education in field of study.



field of study



I don't know

Next

Enough about Janez Starc

Cancel

Luka: Luka Bradeško did Luka Bradeško 3:14:25,

01872

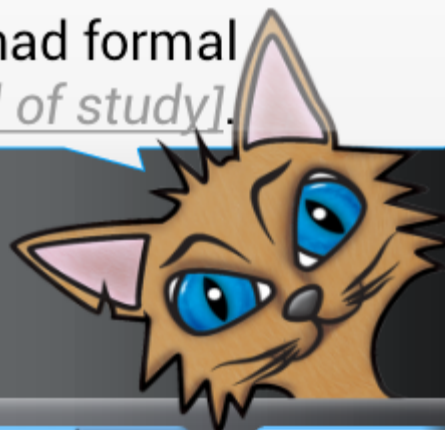
L'Ardoise



Tennis

Thanks for teaching me that [Janez Starc](#) has expert knowledge about [tennis](#).

[Janez Starc](#) has had formal education in *[field of study]*.



computer science

Ok

I don't k

Next

Enough about Janez St

Luka: [Luka Bradeško](#) likes [Michael Witbrock](#).

01872

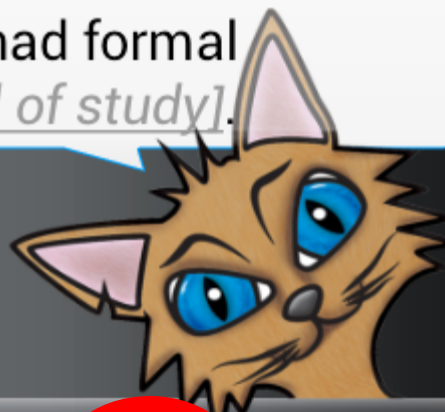
L'Ardoise



Tennis

Thanks for teaching me that [Janez Starc](#) has expert knowledge about [tennis](#).

[Janez Starc](#) has had formal education in *[field of study]*.



computer science

Ok

I don't k

Next

Enough about Janez St

Luka: [Luka Bradeško](#) likes [Michael Witbrock](#).

01872

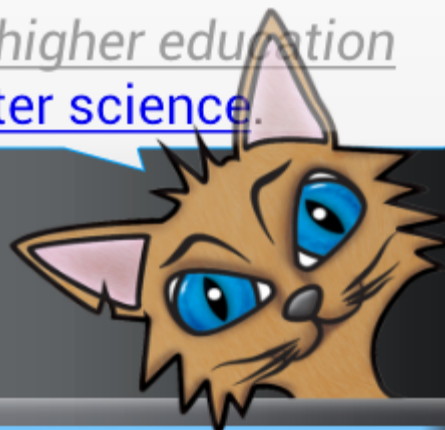
L'Ardoise



computer science

Thanks for teaching me that [Janez Starc](#) has had formal education in [computer science](#).

[Janez Starc](#) has *[higher education degree]* in [computer science](#).



higher education degree

I don't know

Next

Enough ab

+5

Luka: [Luka Bradeško](#) likes [Michael Witbrock](#).

01877

L'Ardoise





# How it can be used in education

- Used as a knowledge assessor of its users
- Acting as a study companion
  - By providing the knowledge back to its users
  - By acting as a Encyclopedic question answering system





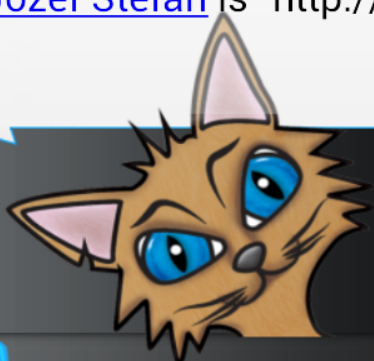
ijs

Which one do you mean?

Inštitut Jožef Štefan

[Inštitut Jožef Štefan](#) is the empty list.

[Inštitut Jožef Štefan](#) is a [research facility](#).  
[Inštitut Jožef Štefan](#) is a [research organization](#).  
[Inštitut Jožef Štefan](#) is headed by [Jadran Lenarcic](#).  
[Jadran Lenarcic](#) is a leader of [Inštitut Jožef Štefan](#).  
[Salad](#) is a leader of [Inštitut Jožef Štefan](#).  
The homepage of [Inštitut Jožef Štefan](#) is "http://www.ijs.si".



Ok

Michael : "architecture" is a good one word description of [Seattle Public Library](#).

be used in education

ge assessor of its users

ompanion

nowledge back to its users

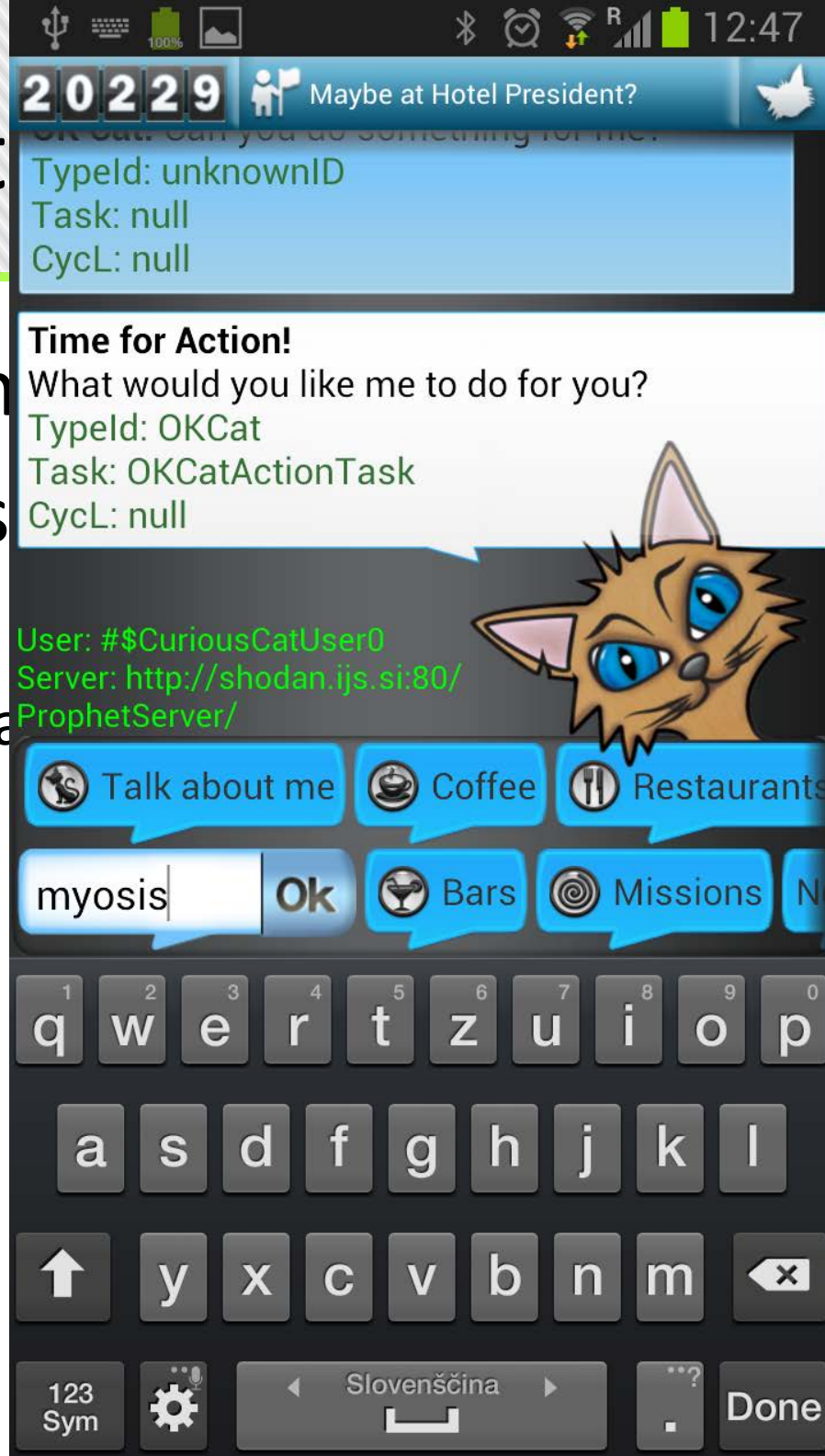
pedic question answering





# How it

- Used as a known user
- Acting as a server
  - By providing a service
  - By acting as a proxy system



# ication

users

rs

ering





# How it

- Used as a known user
- Acting as a system
  - By providing a valid user
  - By acting as a system

20229 Maybe at Hotel President?

Typeld: unknownID  
Task: null  
CycL: null

**Time for Action!**  
What would you like me to do for you?  
Typeld: OKCat  
Task: OKCatActionTask  
CycL: null

myosis  
Typeld: unknownID  
Task: null  
CycL: null

Which one do you mean?  
Typeld: SearchPick  
Task: OKCatActionTask  
CycL: null

User: #CuriousCatUser0  
Server: http://shodan.ijs.si:80/ProphetServer/

miosis meiosis

Michael : The name (SSID) of Forza Coffee Company Wi-Fi is FORZA.

# ication

users

rs

ering







# How it

- Used as a knowledge base
- Acting as a search engine
  - By providing information
  - By acting as a search engine system

20229 Maybe at Hotel President?

[Miosis](#) is a [type of ailment](#).  
Typeld: unknownID  
Task: null  
Cycl: ( # \$ isa # \$ Miosis ( # \$ TheList # \$ PhysiologicalConditionType ) )

[Miosis](#) is a symptom of [acetylcholine poisoning](#).  
[Miosis](#) is a symptom of [miotic substance poisoning](#).  
[Miosis](#) primarily afflicts the [pupils](#).  
[Miosis](#) requires an [organic event](#) playing the role of "".  
[Miosis](#) requires a [living organism](#) playing the role of "".

Typeld: cureSentence  
Task: OneCureTask  
Cycl: null

User: # \$ CuriousCatUser0  
Server: http://shodan.ijs.si:80/ProphetServer/

Ok

Michael : The name (SSID) of [Forza Coffee Company](#) Wi-Fi is FORZA.

# ication

users

ers

ering





# How it

- Used as a kn
- Acting as a s
  - By providing
  - By acting as a system

20229 M

[Myosis](#) is a [type of](#)  
 Typeld: unknownID  
 Task: null  
 CycL: ( # \$ isa # \$ Mic  
 # \$ Physiological Co

[Miosis](#) is a sympto  
[Miosis](#) is a sympto  
 poisoning.  
[Miosis](#) primarily af  
[Miosis](#) requires an  
 of "" .  
[Miosis](#) requires a li  
 role of "" .

Typeld: cureSenter  
 Task: OneCureTask  
 CycL: null

User: # \$ CuriousCatUs  
 Server: http://shodan.  
 ProphetServer/

Michael : The name  
 Company Wi-Fi is F

20229 Maybe at Hotel President?

CycL: null

[The process of meiosis](#) is a [cell cycle phase](#)  
[type](#).  
 Typeld: unknownID  
 Task: null  
 CycL: ( # \$ isa # \$ Meiosis( # \$ TheList  
 # \$ GametogenesisSubprocessType ) )

[Meiosis](#) requires a [haploid cell](#) playing the role  
 of "offspring".  
 All [meiosis](#) has [first meiotic cell division](#) as a  
 characteristic sub-event.  
 All [meiosis](#) has [second meiotic cell divisions](#)  
 during [meiosis](#) as a characteristic sub-event.

Typeld: cureSentence  
 Task: OneCureTask  
 CycL: null

User: # \$ CuriousCatUser0  
 Server: http://shodan.ijs.si:80/  
 ProphetServer/

Ok

Michael : The name (SSID) of [Forza Coffee](#)  
 Company Wi-Fi is FORZA.





# Prototype available on Play

Google play Search +Michael [grid icon] [notification icon] Share

Apps

- My apps
- Shop
- Games
- Editors' Choice

## Curious Cat

Curious Cat Inc. - 10 September 2013  
Social

**Installed**

This app is compatible with all of your devices.

★★★★★ (10) +18 including You

Curious Cat

Luka Bradeško had *item of food or drink* at its 02:48:32, October 1, 2012 visit to Caffe Famel.

cappuccino

Thanks for teaching me that Luka Bradeško had cappuccino at its 02:48:32, October 1, 2012 visit to Caffe Famel.

Does Luka Bradeško prefer the cappuccino at Caffe Famel over the cappuccino at Egoist Lounge Bar?

Yes No I don't know Enough about Caffe Famel

Janez: bread costs 5 euros at Dubajska Pakarna

07897 Caffe Famel

Curious Cat

Thanks for teaching me that Trocadero has kebab on the menu.

Kebab costs *(numeric value)* euros at Trocadero.

3.5

Thanks for teaching me that Kebab costs 3.5 euros at Trocadero.

Is Trocadero a good place to have lunch?

Yes No I don't know Next

Enough about Trocadero

Janez: Pri Zelenem Zajzu is a bar

08385 Trocadero