

Konwersacje z powłoką

Puck, 2016

This page intentionally left blank

1980

Zork, parser i fikcja interaktywna

West of House

You are standing in an open field west of a white house,
with a boarded front door.

There is a small mailbox here.

>open mailbox

Opening the small mailbox reveals a leaflet.

>read leaflet

(Taken)

“WELCOME TO ZORK!”

Adventure

Will Crowther, 1976

Somewhere nearby is Colossal Cave, where others have found fortunes in treasure and gold (...).

I will be your eyes and hands. Direct me with commands of 1 or 2 words. I should warn you that I look at only the first five letters of each word, so you'll have to enter "northeast" as "ne" to distinguish it from "north".

Zork I

Infocom, 1980

A nasty-looking troll, brandishing a bloody axe, blocks all passages out of the room. Your sword has begun to glow very brightly. The troll's mighty blow drops you to your knees.

> kill troll with sword

You are still recovering from that last blow, so your attack is ineffective. The troll's axe barely misses your ear.



West of House

0/0

West of House

You are standing in an open field west of a white house, with a boarded front door.

There is a small mailbox here.

>_

Indiana Jones

LucasArts, 1989



Konwersacje

> ssh server1 'apt-get install firefox'

> install Firefox on server1

> vlc -f /media/movies/movie

> show me a movie

gramatyka

jak można wszystko dobrze skomplikować

Usage: ./script cmd host

CMD=\$1

ARG=\$2

Usage: show us some cat photos

CMD=??

ARG=??

Peter Naur

1928 -



R.I.P.
Peter Naur

1928 - 2016



Notacja BNF

```
<polecenie> ::= <czynność> <obiekt>  
<czynność> ::= <czasownik>  
<obiekt> ::= <rzeczownik> | <rodzajnik>  
<rzeczownik>
```

```
<czasownik> ::= <słowo>  
<rodzajnik> ::= the | a | an  
<rzeczownik> ::= <słowo>
```

```
<słowo> ::= [a-zA-Z]+
```

install firefox

install a program

show me a book

Regex::Grammars

```
my $grammar = qr{
  <nocontext:>
  <Sentence>
  <rule: Sentence>      <VerbGroup> <NounGroup> <ArgGroup>?
  <rule: VerbGroup>    <Verb> <VPostfix>?
  <rule: Verb>         <.Word>
  <rule: NounGroup>    <NPrefix>? <Noun>
  <rule: Noun>         <.Word>
  <rule: ArgGroup>     <APrefix>? <Args>
  <rule: Args>         .+
  <rule: VPostfix>    me | us | them
  <rule: NPrefix>     a | an | the | some
  <rule: APrefix>     on | about | onto | upon | in | from
  <rule: Word>        \w+
}x;
```

bash: perl: command not found

- Python: Yapps, pyparsing
- Ruby: treetop
- Haskell: Parsec
- Java: powodzenia

Rozbiór logiczny

remove pulseaudio from all known hosts

- czynność
- kontekst
- argumenty

Modus Operandi

1. Sprawdzam, jaką czynność w jakim kontekście mam wykonać (parser).
2. Czy znam ten kontekst?
3. Czy wiem, jak w tym kontekście wykonać zadaną czynność?
4. Jeśli tak, to wykonuję czynność, uwzględniając przekazane argumenty.

Kontekst == obiekt

```
try {  
    $context = use_module($noun)->_new();  
}  
  
catch {  
    say "I'm sorry. My vocabulary does not contain $noun.";  
    exit(0);  
};
```

Czynność == metoda

```
if ($verb ~~ @$supported) {  
    $context->$verb($args);  
}
```

```
else {  
    my $verblist = nice_join(@$supported);  
    say "I know about '$noun', but I cannot do '$verb'.";  
    say "What I can do is $verblist.";  
}
```

Live demo

ten moment, kiedy nic już nie działa

Inne takie

niekontrolowana emisja informacji

To nie jest bardziej funkcjonalne

> please install firefox on my system

> apt-get install firefox

...co najwyżej bardziej estetyczne.

Speech to text

Python, SpeechRecognition

pip install SpeechRecognition

[ggulati.wordpress.com/2016/02/24/
coding-jarvis-in-python-3-in-2016/](http://ggulati.wordpress.com/2016/02/24/coding-jarvis-in-python-3-in-2016/)

Projekt Jasper

jasperproject.github.io

- commodity hardware
- dobra dokumentacja
- silnik + luźne skrypty

IF - jak grać?

Frotz

- tekstowy
- działa wszędzie
- w wersji iOS spaczkowy z dobrą selekcją gier

Gargoyle

<http://ccxvii.net/gargoyle/>



IF - w co grać?

Współczesne

- Spider and Web (*A. Plotkin*)
- Lost Pig (*by Grunk*)
- 9:05 (*A. Cadre*) (<http://adamcadre.ac/if/905.html>)

Klasyka (Infocom)

- Wishbringer
- A Mind Forever Voyaging
- Bureaucracy

Lost Pig



Pig lost! Boss say that it Grunk fault. Say Grunk forget about closing gate. Maybe boss right. Grunk not remember forgetting, but maybe Grunk just forget. Boss say Grunk go find pig, bring it back. Him say, if Grunk not bring back pig, not bring back Grunk either. Grunk like working at pig farm, so now Grunk need find pig.

IF - jak tworzyć?

Inform 6

Object Living_Room "Living Room"
with
description "A comfortably furnished living room.",
n_to Kitchen,
s_to Front_Door,
has light;

Inform 7

The Living Room is a room. "A comfortably furnished living room."

The Kitchen is north of the Living Room.

The Front Door is south of the Living Room.

The Front Door is a door. The Front Door is closed and locked.

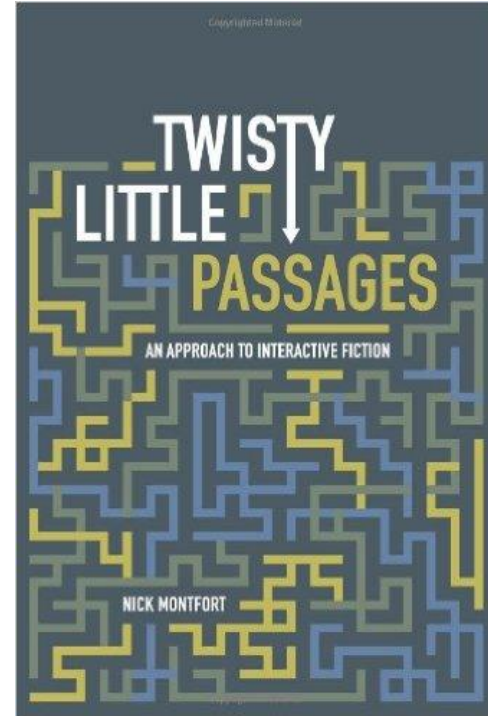
IF - ile jeszcze będzie o tym slajdów?

**BEFORE THE
FIRST PERSON SHOOTER
THERE WAS THE
SECOND PERSON THINKER.**



GET LAMP

a documentary about adventures in text



Wynajdowanie koła

Fabric

<http://www.fabfile.org/>

Sup

<http://pressly.github.io/sup/>

Parsowanie zdań języka naturalnego

NLTK

<http://www.nltk.org/>

***“Natural Language
Processing with Python”
(2009)***

ACE

(Attempto Controlled English)

<http://attempto.ifi.uzh.ch/site>

blindluke@gmail.com