

5.3.7 `xpce.command` - run an MCSAT command

Description:

This is the simplest command and the only one that does not expect a JSON string. It simply takes any of the commands as described in [MCSAT] in the form of a string (including the terminating `;`), and returns a string.

5.3.8 XPCE JSON Formula Syntax

```
FORMULA := ATOM
         | {"not": FORMULA}
         | {"and": [FORMULA, FORMULA]}
         | {"or": [FORMULA, FORMULA]}
         | {"implies": [FORMULA, FORMULA]}
         | {"iff": [FORMULA, FORMULA]}
         | {"xor": [FORMULA, FORMULA]}

ATOM := {"atom": {"predicate": NAME, "arguments": ARGUMENTS}}

NAMES := [NAME++',']
ARGUMENTS := [ARGUMENT++',']
CONSTANTS := [CONSTANT++',']
NUM := ['+'|'-' ] simple floating point number
NAME := chars except whitespace parens ':' ',' ';'
ARGUMENT := CONSTANT | {"var": NAME}
CONSTANT := NAME
```

5.4 XPCE example

The PCE sources include a simple C client in `src/xpce-client.c`, which is built automatically when PCE is built. Please refer to PAL Framework website for an example of a Java client.

6 Bibliography

- [1] [MarkovLogic] Richardson, Matthew and Domingos, Pedro. "Markov Logic Networks," Machine Learning, 2006.
- [2] [MCSAT] Poon, Hoifung and Domingos, Pedro, "Sound and Efficient Inference with Probabilistic and Deterministic Dependencies," Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI-06) 2006, 458-463.
- [3] [LazyMCSAT] Singla, Parag and Domingos, Pedro, "Memory-Efficient Inference in Relational Domains," Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI-06), 2006, 488-493.
- [4] [Alchemy] Kok, S., Singla, P., Richardson, M. and Domingos, P. "The Alchemy system for statistical relational AI," Technical report, Department of Computer Science and Engineering, University of Washington, 2005. <http://www.cs.washington.edu/ai/alchemy>.
- [5] [Learners] Dietterich, Thomas G. and Bao, Xinlong, "Integrating Multiple Learning Components Through Markov Logic," Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence, 2008.