

## **Application software and robot device**

Terbinari operating program represents interactive training and conversation model, natural language processing semantic analysis/matching logic algorithms and controller operating methods.

Artificial conversational entity performs input/output question-answering, learning, spoken dialog system with multi-function chat-bot interface and anthropomorphic humanoid robot Control Bot Mechanism animatronics operator. Cervical motility device implements mouth speech events motion and eyes/head tracking contact and response under facial detection/recognition process of computer vision.

Bot operates individual unique memory content updated by Interlocutor input in frames of the system legal code. Answer defines output for dialogue as a tool of reflective analysis by returning efferent recall from human-like machine cognitive function. Embodies autonomous companion simulator as trainable virtual teach assistant and agent of compensatory intercourse for various interactive communication tasks.

## **Research and technology development**

"Toy Artificial Intelligence" science, technology and engineering laboratory operates on an independent creative platform of experimental development research in the field of intelligent system and mechanics, based on computational linguistics, automatic natural language processing and mechatronics concepts by inventor Lado Oniani.

Implementation startup based on theory of logic was started in 2016 in home laboratory environment with multidisciplinary engineering approach, designing an operating program of robot training and conversation model semantic analysis and motility operator methods.

Prototype custom technology production includes information processing algorithms, control methods and implementing terminal application software desktop and web platform of Unit Network environment, as well as inventing mechanics aimed on modeling and designing humanoid anthropomorphic robot architecture.

Technology development and experiment focuses on creation of invention prototype design solution based on cognitive abstraction original concepts and research.

## **Prototype application compatibility and usage**

Particular Terbinari software implementation developed on Microsoft Windows OS platform with using of system speech synthesis/recognition references and external CV library output

## **Project**

- Terbinari v 1.0.0 operating program training and conversation model semantic processing algorithms controller operating methods
- Tet: artificial conversational entity prototype application software interface and control
- CBM Humanoid robot device (Control Bot Mechanism)

Operating program interface interacts with training and conversation system response output personified in artificial entity endowed with individual memory slot, represents dialog processing models in text-to-text, text-to-voice or voice-to-voice modes and robot control methods, which mechanical recall provides tracking orientation and eye contact with user/interlocutor, as well as mouth device synchronization with speech motility events.

## **Lado Oniani**

- Logic and technical concept
- Algorithms and methods
- Architecture
- Engineering
- Programming
- Content
- Mechanics (design and development)
- Manufacturing (modeling and 3D printing)
- Electronic devices/components assembly solution



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