

CROATIAN ASSOCIATION OF PARAPLEGICS AND TETRAPLEGICS



Using of Present- Day Equipment and Technology for Quadriplegic Persons

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Tetraplegics are people who have partial or full lack of functions under level of injury – neck part of spinal cord.

- They use a wheelchair independently or by help
- Usually a result of an accident
- Their whole life is fundamentally changed
- Physical abilities vary
- Majority is dependent on assistance
- They are forced to learn how to live again and accept their disability



My personal example

- Result of a car accident in 1992
- Abilities are minimal and assistance is necessary
- Continued study of Economics (important accessible transport and building of Faculty)
- Graduated 1998
- Great support from family and friends
- Working at home using computer and mechanical extensions
- After 1998 condition worsens and computer usage is possible only by voice commands



Home automation

- **Automate my home and working space with modern technology**

Two reasons:

- greater personal independence
- help to those who assist and live with me



Goals

- Communication (telephone, e-mail)
- Using computer (software applications)
- Controlling home devices:
 - Light switches
 - Home Theater
 - Heating
 - Electric bed
 - Doors, locks etc.



Today's achievements

DRAGON NATURALLY SPEAKING ***(partial solution)***

ADVANTAGES

- Voice Control
- Managing Computer Software
- Not expensive
- Example: E-mail, Internet, Microsoft office etc.

DISADVANTAGES

- Sensitive on exact pronunciation
- Not localised (into Croatian language)
- Automation of home devices is not possible (only software)



Discovering technology

- Internet discovered many ways to improve quality of life of disabled people
- Development of modern technologies is exceptionally important to all of us
- Modern technology at home is not some prestigious case, but something very useful
- Through large selection I picked up a product as one of possible solutions



HAL 2000 Deluxe Package

It uses vocal commands for managing home devices

Example:

“Hal, turn off the light”

or

”Hal, turn on TV on channel 2”



HAL 2000 Deluxe Package

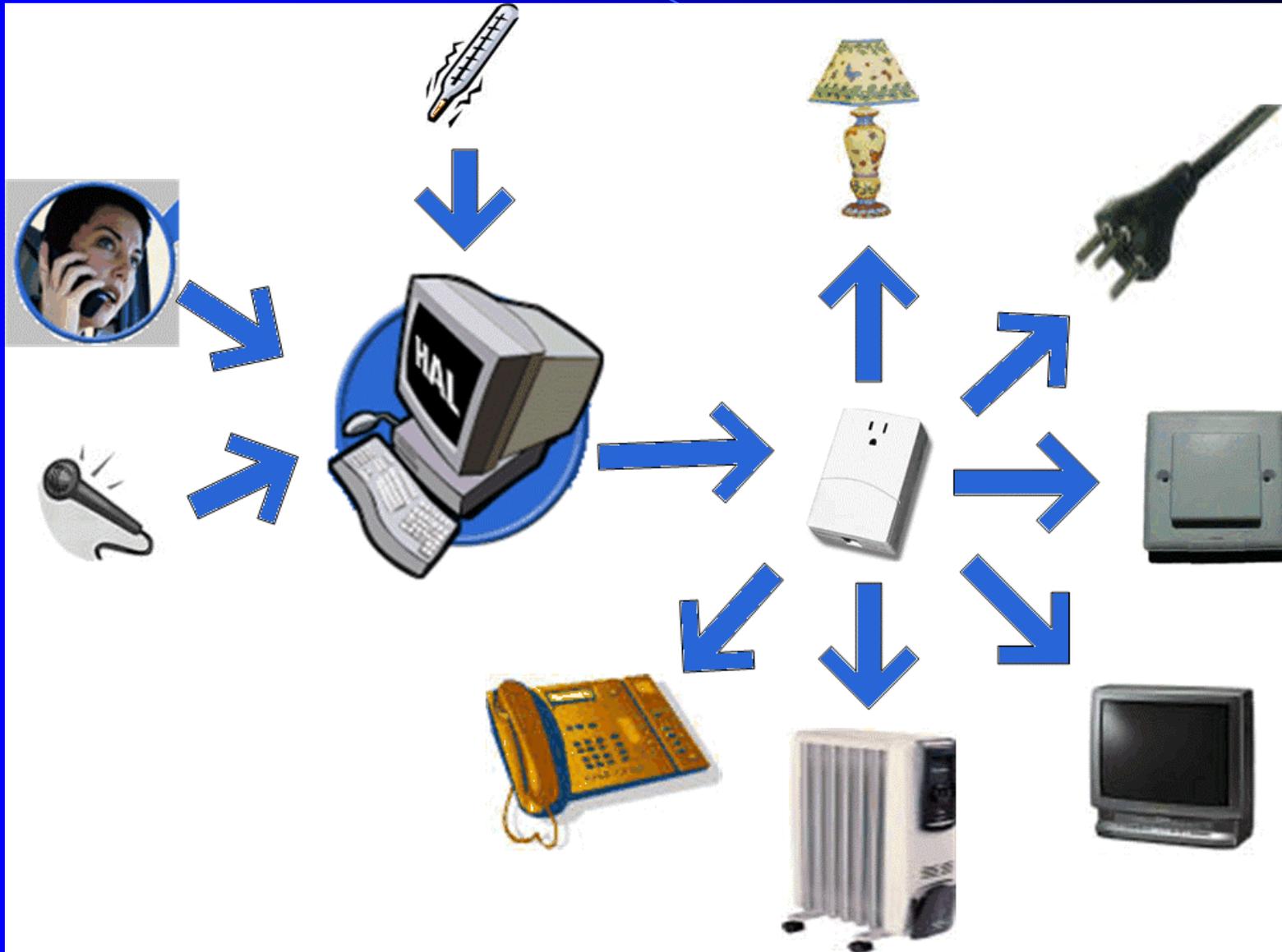
HARDWARE

- X10 Home devices controlled by PC
- No rewiring necessary (using home power grid)
- Many different devices of various purposes
- Possibility of Modulation

SOFTWARE

- Vocal Management
- Controlled by Telephone or Microphone
- Learns vocal commands
- High level of intelligence

Manageable devices





Problems

- Adaption to European Standard Voltage
- Not localized (into Croatian language)
- Price:
 - US\$ 1000 in USA
 - EUR 1500 in Europe
- Requests technical knowledge



Conclusion

- **The quality of life:**

Every person will have a full and worthy life and present day technology and equipment give possibilities for it

- **Problem:**

The society does not recognise these needs as necessary and helpful to personal assistants.

- **Solution:**

Efforts individuals and whole society should be directed towards law regulation of giving this helping technology to people with high level of injury.



For this, an experience of an individual is essential, as well corporation with those scientific institutions, knowing what and in what way this is possible to implement in our circumstances.

More about *HAL 2000*:

<http://www.automatedliving.com>

Be active, involved in life and take challenges is key of quality of life.





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