# Internet of toys: mission, vision and future applications

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# Outline

- Motivation

- Historical perspective

- System Architecture

- Requirements & Challenges

- Conclusion

# Motivation

- Modern way of living (lack of time)
- Easy access to many smart devices (smartphones, tablets, laptops, ….)
- Time spent in front of smart devices
  - According to NPD, 91 percent of U.S. children ages 2-17 play video games (64 million).
  - Gaming among kids ages 2-5 has increased the most.
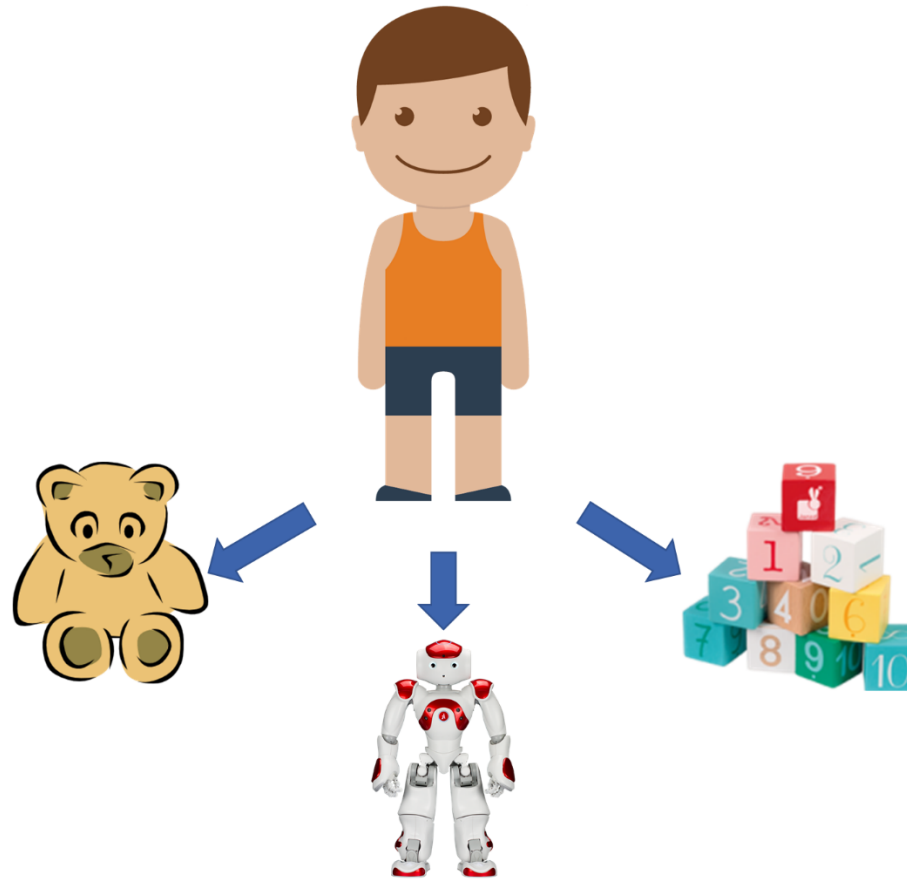
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  - According to NPD, 91 percent of U.S. children ages 2-17 play video games (64 million).
  - Gaming among kids ages 2-5 has increased the most.
- Most of the studies are conducted in a traditional way: interviews, questionnaires, etc.  -> time consuming
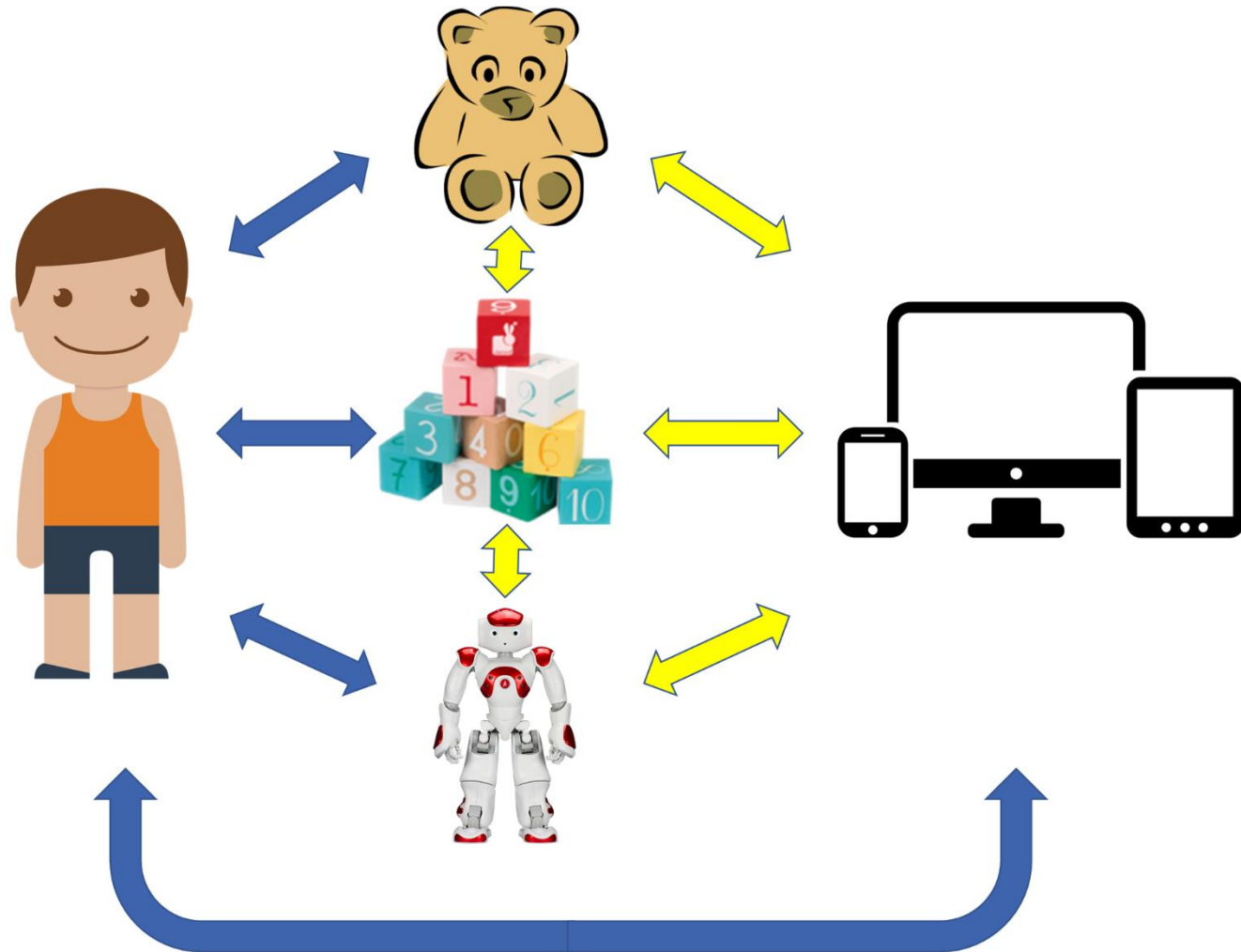
# Internet of toys

- Internet of things (IoT)

- Smart toy - a toy equipped with processor, memory and sensing unit, capable to detect physical phenomena and to react in a predetermined way.

- From IoT to Internet of Toys (IoToys)

search term

| | |
|---|---|
| "Internet-connected toys" | |
| "Internet of Toys" | |
| "Connected toys" | |
| "Smart toys" | |
| "Intelligent toy" | |

1          10          100          1000
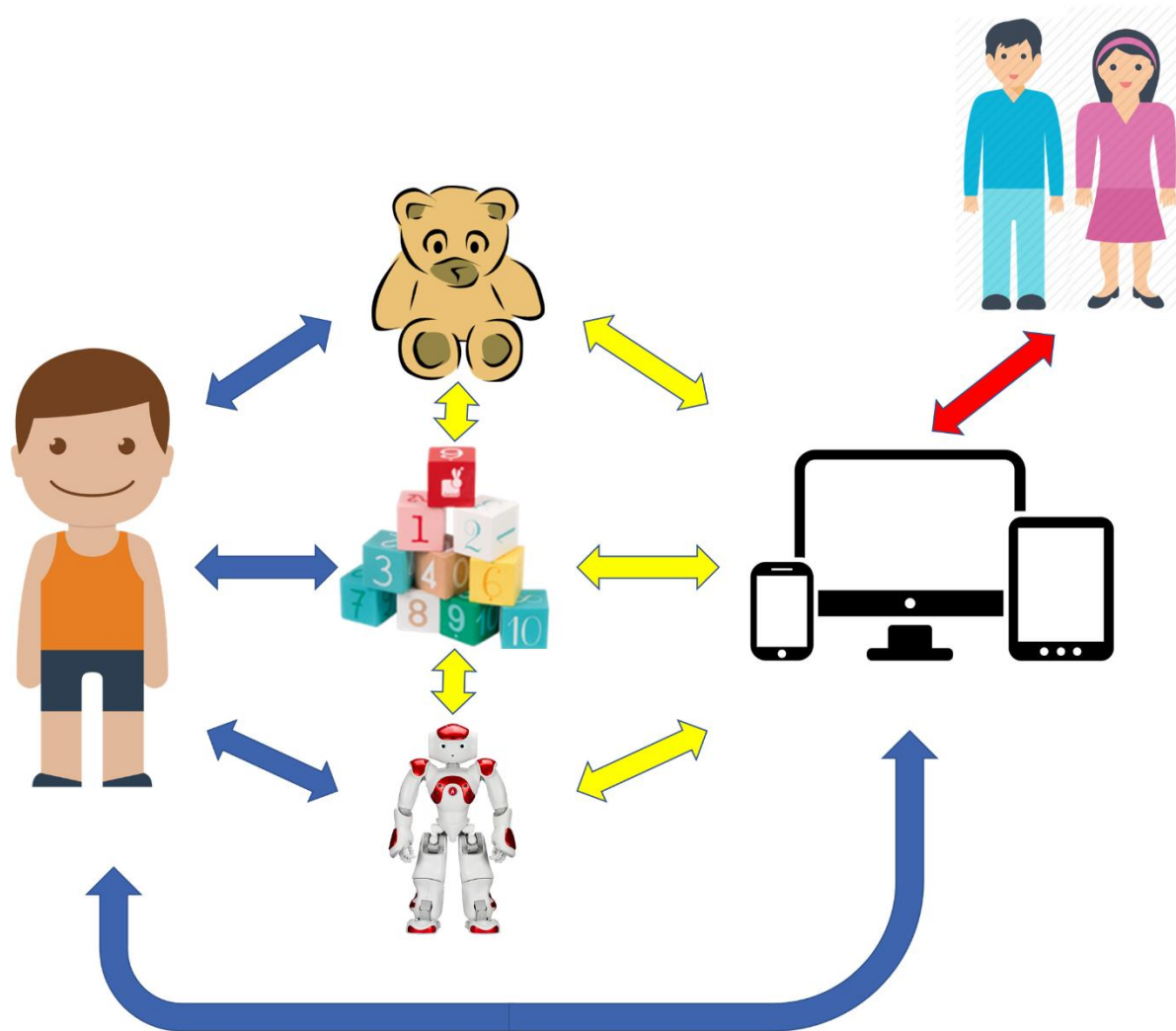
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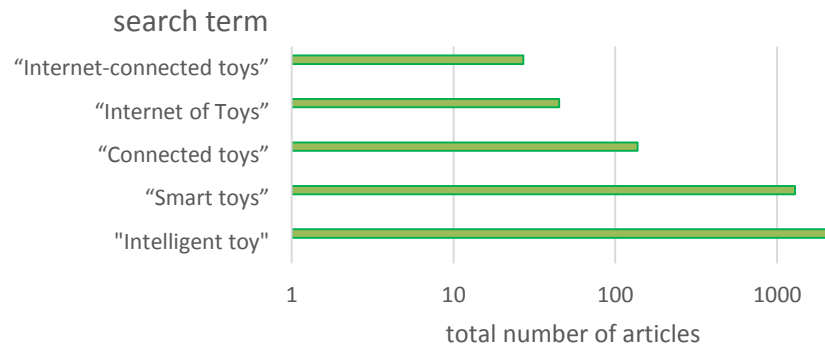
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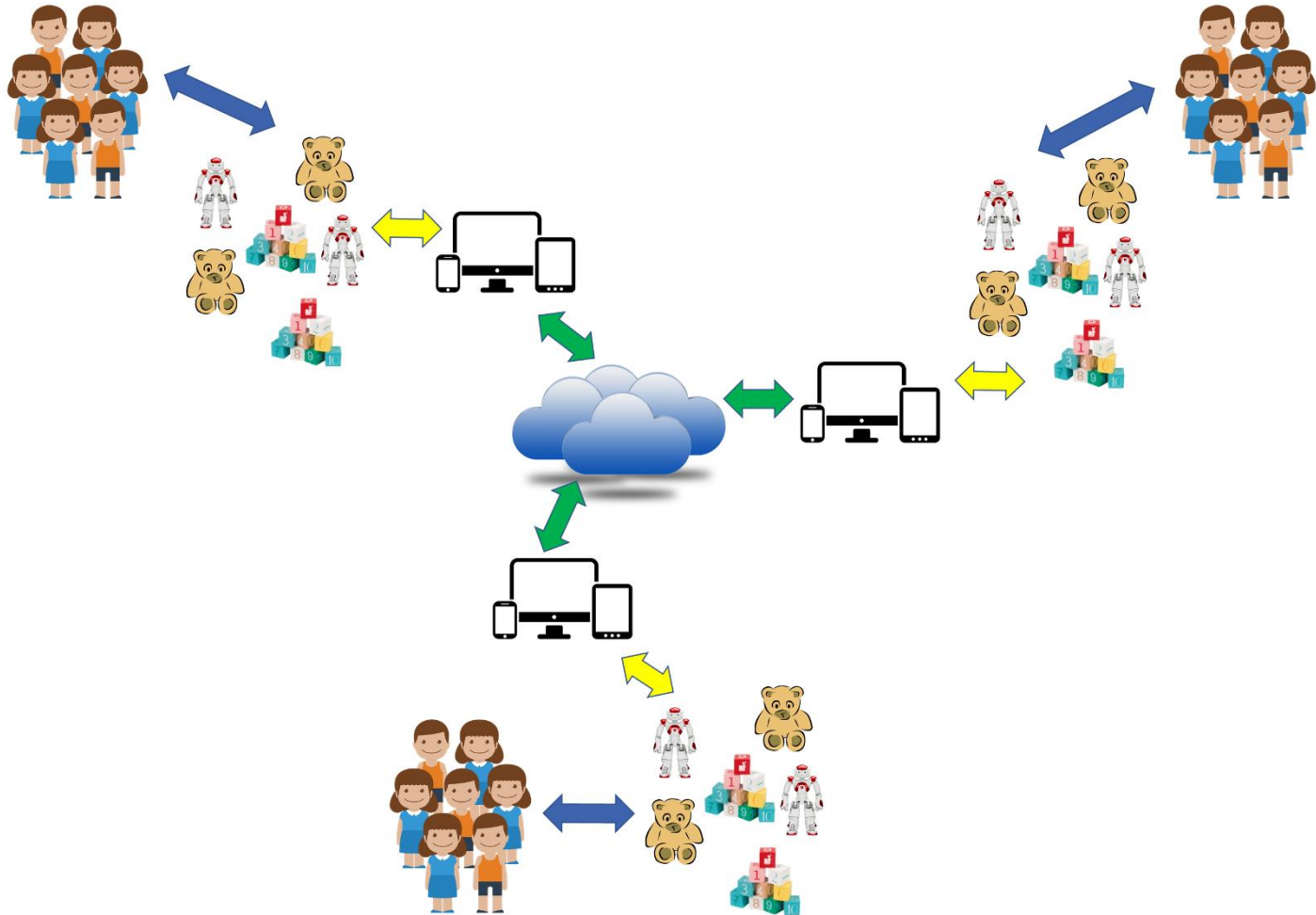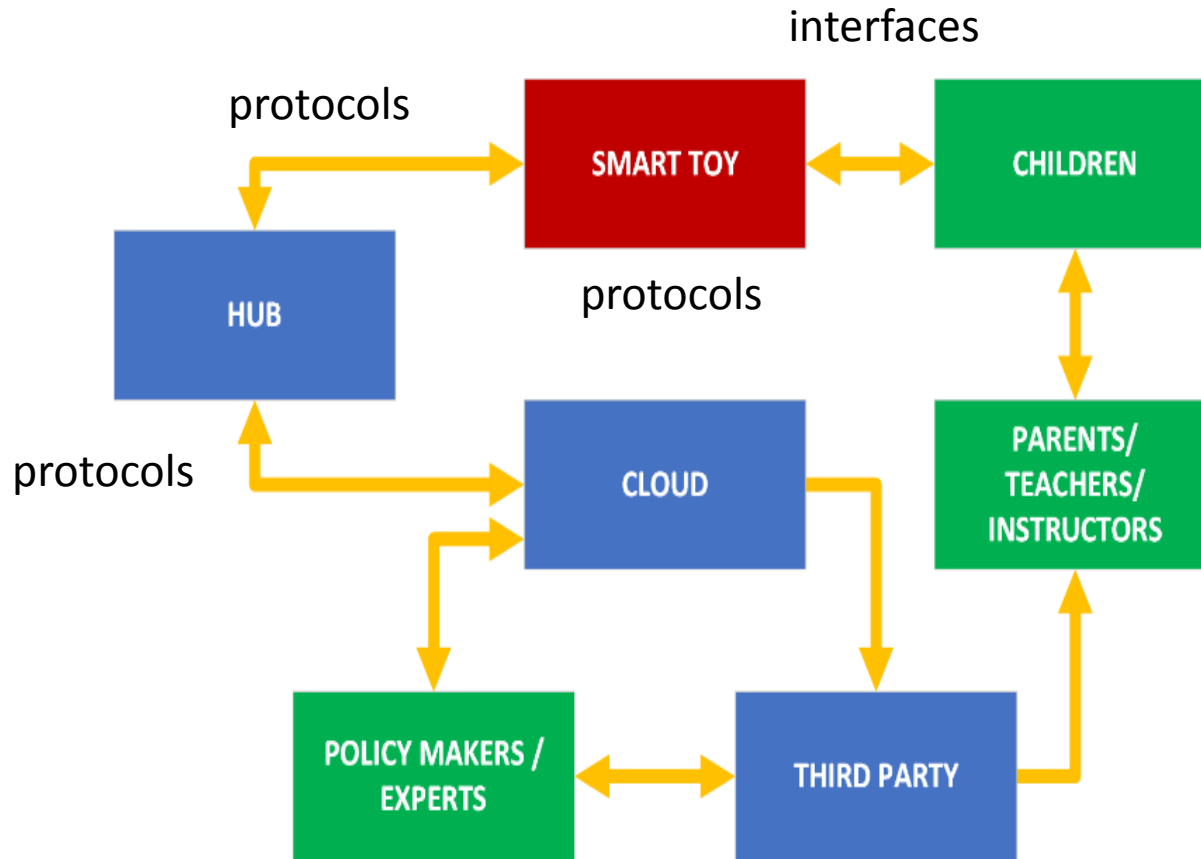
# Today

# Future perspective

# System architecture

# Requirements & Challenges

- **Technical:**
  - Interactivity in IoToys (interfaces)
  - Toys interoperability
  - Data security
  - Privacy issues
  - Big data issues
- **Non technical:**
  - Ethical issues
  - Legislation

# Conclusion

- IoToys has huge potential for future business, especially in big countries (new platforms, tools and applications)

- IoToys research is still in the beginning (different terminology, a few groups in EU, mainly from education perspective)

- New IoToys systems architecture

- Identify the challenges