



<http://hmi.ewi.utwente.nl/puppyir>

PuppyIR: An Open Source Environment to construct Information Services for Children

As adults we are keen to help children maximize their full potential. Developing children's abilities to find and understand information is key to their development as young adults. The Internet offers children exciting new ways to meet people, learn about different cultures and develop their creative potential. In a world where Internet and technology play such an important role as it does today, it is absolutely necessary that children can assess the meaning of gathered information and can in child-friendly ways get engaged in interaction with content

However, children's ability to use the Internet is severely hampered by the lack of appropriate search tools. Most Information Retrieval (IR) systems are designed for adults: they return information that is unsuitable for children, present information in lists that children find difficult to manage and make it difficult for children to identify the relevant parts. Worse, almost all Internet search engines confront children with inappropriate material.

PuppyIR is an FP7 project that will help children search the Internet safely and successfully by the design of an **Open-Source** platform of child-friendly information services. These **Information Services** will be able to summarise content for children, moderate information for children, help children safely build social networks and intelligently aggregate for presentation to children. **PuppyIR** aims to facilitate the creation of child-centric information access, based on the understanding of the behaviour and needs of children. **PuppyIR** will provide a suite of components that can be used by system designers to construct usable and tailored IR systems for children and the opportunity for children to fully exploit the Internet. **PuppyIR** will develop new interaction paradigms that allow children to express their information needs simply and have results presented in an intuitive way. **PuppyIR** will contribute to the evaluation of children's IR systems by the development of child-centred evaluation methods.

<p>The United Nations Convention on the Rights of the Child 1989</p> <p>Adopted and opened for signature, ratification and accession by General Assembly resolution 44/25 of 20 november 1989</p> <p>Entry into force 2 september 1990 in accordance with article 49</p>	<p>Article 17</p> <p>States Parties recognize the important function performed by the mass media and shall ensure that the child has access to information and material from a diversity of national and international sources, especially those aimed at the promotion of his or her social, spiritual and moral well-being and physical and mental health. To this end, States Parties shall:</p> <ul style="list-style-type: none">(a) Encourage the mass media to disseminate information and material of social and cultural benefit to the child and in accordance with the spirit of article 29;(b) Encourage international co-operation in the production, exchange and dissemination of such information and material from a diversity of cultural, national and international sources;(c) Encourage the production and dissemination of children's books;(d) Encourage the mass media to have particular regard to the linguistic needs of the child who belongs to a minority group or who is indigenous;(e) Encourage the development of appropriate guidelines for the protection of the child from information and material injurious to his or her well-being, bearing in mind the provisions of articles 13 and 18.
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Information access for children is a fundamental right

In 1989, the United Nations has published the convention on the rights of the child. Article 17 grants the child an explicit right of access to information. In the context of today's mass of information, it is crucial that children have access to information from diverse sources, both national and international, and that this access has a positive and healthy aim. The whole process of accessing information is primordial to the child's education and development in the broadest sense. Indeed, information plays a very important role in the child's growing, maturing and developmental process. Children are seeking appropriate information at every stage of their lives. Information is not only a necessary factor in the different stages of development from prenatal development to adolescence, but also it is multifaceted, with physical, emotional, cognitive and social angles. Inspired by this article 17 PuppyIR **aims to create an open source platform that can be used to build child-friendly information services** that assist children in the interaction with information, whether it is for fun and entertainment, or for learning and education.

Information Services for use by children

Information services for children must control the information sources from the Internet to able to promote high quality services during the exploration and the learning phase of the access process. They must account for the following observations that are particular to children:

- Children are very creative and open-minded.
- Children are highly sensitive to emotion.
- Children express their information need differently from adults.
- Children are particularly exposed to unsolicited material.

PuppyIR will conduct state-of-the-art research that will design, develop, implement, and evaluate information services that are appropriate to the special and wonderful nature of children. The research will make use of the latest research and technology in information access. However PuppyIR will not simply adapt existing solutions to cater for children. The proposed information services will be designed, developed, implemented and evaluated based on the true understanding of the needs and behaviours of the targeted user population, that of children. In line with the user-centred approach taken, the research and development activities of PuppyIR will be guided by scenarios created in partnership with the project partners who are expert in supplying information for children. To achieve these aims, the project will focus on the following four objectives:

- Investigation and promotion of new interaction paradigms for children's access systems.
- A number of interrelated research questions will be addressed that contribute to the interaction of children with information services. The focus will be on presentation, mining and language issues for the appropriate development of these information services.
- An Open Source Framework will be created to support the development of common interchangeable components to support the realization of information services for children.
- Identification of appropriate evaluation measures and develops an evaluation framework for information services for children.

Open Source development

PuppyIR will construct an Open Source Framework that will provide the infrastructure to develop 'child-focused' and 'child-friendly' components to be deployed within child information services. Within the framework developed components will be readily interchangeable to support the rapid development of information services enabling the creation process. The Open Source Framework will also provide the perfect platform for the collaboration and dissemination of the outcomes of this project as the components developed for the framework will be made openly available to interested parties for use, modification, improvement, and redistribution; to compare and create different child information services for both research and commercial purposes.

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Timeliness

Surprisingly, the commercial world has not found its way yet to develop adapted information services to children and teens, except for the gaming industry. While the gaming industry has taken some initial steps to make game services adapted to young children, when it comes to information services (especially with regard to accessing information) we walk in an absolute desert, but the PuppyIR consortium has the appropriate technological baseline and all the necessary knowledge to start tackling the challenges inherent to this domain.

Consortium



Contact

Franciska de Jong (project coördinator)

Universiteit Twente
Dept. of Computer Science, cluster Human Media Interaction
Postbus 217, 7500 AE Enschede
The Netherlands
Phone: +31 53 4894193
Fax: +31 53 4893503
Email f.m.g.dejong@utwente.nl

Project url: <http://hmi.ewi.utwente.nl/puppyir> or <http://www.puppyir.eu>