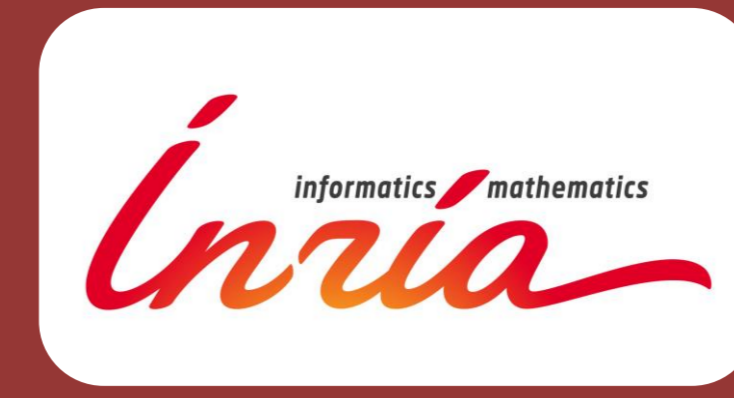


Paving the WAI: Defining Web-Augmented Interactions

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Proposal: Web-Augmented Interactions (WAIs) as a new class of interactions



Definition: a Web-Augmented Interaction (WAI) is a user's interaction with a system that is improved by allowing the system to access Web resources in the background in order to analyze, specify or enrich the user's requests or the system's responses, for the benefit of the user (matching her goals, tasks and interaction context).

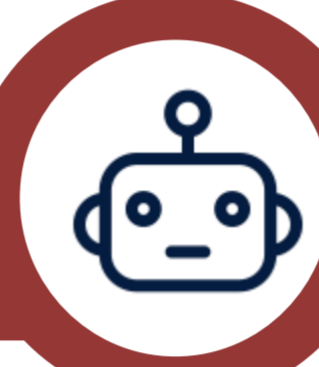
Example: a robot accessing the Web to gain knowledge and improve the interactions it can offer

Motivation and goal



- **Goal:** to elaborate an approach to designing WAIs that will include guidelines and standards.
- **First step :** to characterize the WAI class of interactions.

Real cases of WAIs



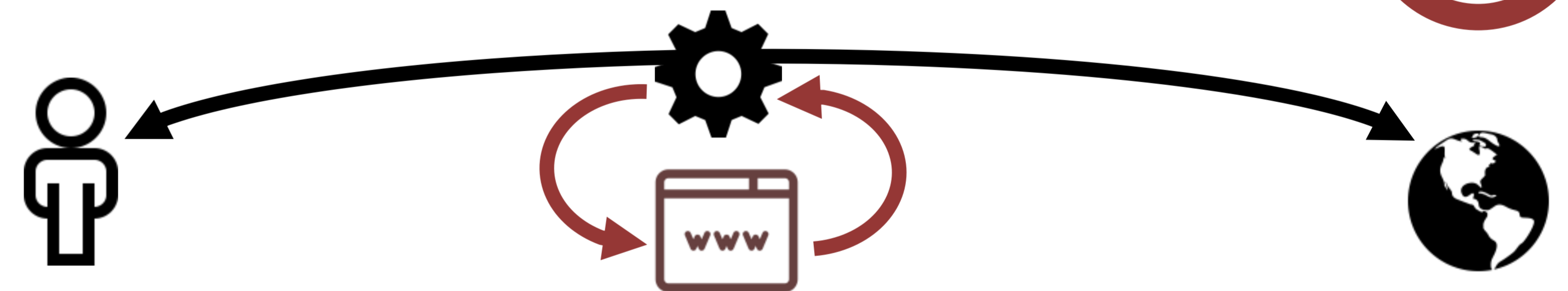
- **ALOOF** [15] : interact with a robot learning missing knowledge from the Web about surrounding objects, places, etc.
- **AZKAR** [4] : interact with museum objects and scenes remotely via a robot using the Web to get/provide knowledge about the museum objects and scenes.
- **QAKIS** [6] : interact with a Question Answering system learning users' linguistic variations from the Web.
- **OCKTOPUS** [11] : interact with on-line epistemic communities' analysis results through a Web-based labeling of the communities.
- **WASABI** [3, 5] : interact with a music exploratory system exploiting Web resources.
- **SeaLife** [14] and **SMILK** [16]: interact with a browser automatically linking Web resources (data, references) to the Web content in real time
- **myCampus** [9] : interact with on-line services using Web-based user's personal knowledge.

Related Work



- **Instrumental interaction** [1]: interactions between users and domain objects are mediated by software instruments in general.
- **Knowledge-based augmented reality** (e.g. [8]) : local knowledge bases used to support a specific type of interaction
- **Ontology-driven document enrichment** (e.g. [12]) : improving information retrieval and document access using ontologies
- **Augmented browsing** (e.g. [13, 14]): specific sources to add definitions, links and additional resources when browsing
- **Web Augmentation** [2]: augmenting the functionality of the Web itself.

What distinguishes WAIs



- the interaction is augmented through the access or analysis of Web resources.
- the augmentation is performed by the system during the interaction.
- the processing and Web access are intended to be transparent to the user.
- the resulting interaction is improved in terms of user experience.

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