DemIL: an Online Interaction Language between Citizen and Government

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ABSTRACT
Electronic democracy should provide information and service for the citizens on the Internet, allowing room for debate, participation and electronic voting. The languages being adopted by mass communication means, especially Reality Shows, are efficient and encourage public participation in decision-making. This paper discusses a citizen-government interaction language intended to facilitate citizen participation in the government's decisions. An e-Democracy Model for people participation through web-based technologies is conceived. This model specifies the syntax of an Democracy Interaction Language, a DemIL. Such language incorporates characteristics of Reality Show Formats, and it is the back-end of a web-interface project in the domain researched. The study of case Participative Budget of Brazil represents the language proposed.

Categories and Subject Descriptors
H.5.2 User Interfaces

General Terms: Design, Human Factors, Languages

Keywords: Interface, Interaction, e-Government, e-Democracy.

1. INTRODUCTION
Brazil has stood out among other countries with a long history of using technologies to provide citizens with services through the eletronic channels [2], including the success achieved through electronic balloting and electronic submission of tax return forms [4]. The use of Information and Communication Technologies (ICT's), especially on the Internet, allows citizens access to information, services and participation in government-related issues [5].

The Brazilian government democratic regime is, in the essence, representative, once that through elections are defined the rulers. Citizen participation in particular can secure democracy, as it generates a continuous flow of information between citizens and the government, helping them in the decision-making process. However, in order for democracy to really exist, citizens should articulate a discourse, outline proposals, discuss them and confront them with other proposals through public communication means.

Some instruments of democratic innovation has been allowing citizens' participation, being the main of these the Participative Budget (PB) of the municipal districts. The implantation of it is given through several strategies, such as Municipal Assemblies and representatives' popular election by regions. Electronic democracy (e-Democracy) can facilitate such estrategies, turning ICT's not only into a voting tool but also into an environment capable of securing debate and citizenship.

As 'democracy' means government by the people, the project to ICT's should take into account the peculiarities of every citizen user, seeking an action role facilitated by interaction and aiming at digital inclusion. This universal public will in effect be able to communicate with the e-Government if it is capable of acting naturally in a Web environment. It is noted that providing access to technological infrastructure is not enough to turn e-democracy feasible, with is a current effort by many governments.

Medias used day-by-day by citizens, such as television, incorporate an widely accepted language. Reality Shows [3] such as Big Brother Brazil, run by the Globo Television Network (Endemol Format), attract a wide audience and encourage public participation in decision-making. Although these programs are broadcast on television, participation in the voting process also happens through the Internet, through cellular phone messages or through conventional telephone connection. The conception of an e-Democracy model could profit from incorporating characteristics of this program format along with design and assessment of interfaces supposedly suitable for e-gov domain [4][5].

Taking into account the above factors, we plan to conceive an e-Democracy Model for people participation through web-based technologies. This model specifies the syntax of an Interaction Language (DemIL). Such language incorporates characteristics of Reality Show Formats - interactive, discussed and democratic, and it is the back-end of a web-interface project in the domain researched.

2. DemIL
The mapping of DemIL is approached through the scene use of a Participative Budget, as a proposal for automatization of Assemblies with popular participation, and the initial specification of the syntax of DemIL. To model the Participative Budget environment, initially, are defined the strategies, in other words, were defined the tasks executed by government, mediator and citizen. A Municipal Assembly could be described in the following format:

WWW 2006, May 23–26, 2006, Edinburgh, Scotland.
ACM 1-59593-323-9/06/0005.

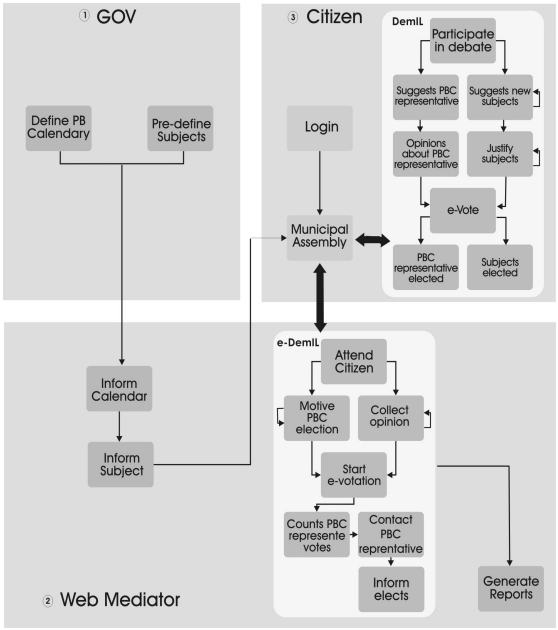

Figure 01. DemIL in Participative Budget Environment

The Democracy Interaction Language (DemIL) syntax, which establishes the primitive of communication among involved in the PB process. The mapping of these actions in an Interaction Language foresees the definition of the private words, extracted of the grammar exemplified above. They are examples of private words of the of, composed of actions; primary keys (such as IDCit) and respective fields (such as Text and Subject):

ENTER(IDCit,Text)
ARGUE(IDCit,Subject,Opinion)
QUESTION(IDCit,Subject,Opinion)
MOTIVATE (IDCit,Subject,Opinion)
LOCATE(IDCit, Subject,Place,Justification)
DENOUNCE(IDCit, Subject,Opinion)
VOTE(IDCit,Vote,Justification)
THANK(IDCit,Text)

The use of this syntax concatenates the taken actions, in other words, should supposes when the mediator should request that the citizen argues, when this should be motivated, or, for example, when should vote in some subject/representant in discussion in the environment, once that there is a communication strategy. The information collected of every citizen in the debate, with the respective performed actions, are counted in the environment and will be available to stimulate the discussion with others citizens. The environment also foresees the individualized assistance; an online mural and multimedia resources use, however the rules of these are not boarded in this research stage. The Interaction Language specifies will still contemplate, must also contemplate, among others, the creation of generalizations, the bounding or not of syntaxes of private words, and usage of ontology. DemIL allows a dialog between citizen and government structured in tags, not being necessary a exhaustive text mining or the use of a natural language processing.

Interaction Language is the interface design back-end of e-Democratic model. Its interface is desenvolved using the folow tools: a) domain and user analysis [4] (Field Research); b) scenarios through Case of Use Diagrams; c) Task Model (GOMS - Goals, Operators, Methods, and Selection Rules); d) Interaction Model MoliC-Interaction Model [1]; e) Interface Storyboards; and f) Interface Evaluation [4][5]. A later implementation of this e-Democracy model should include the Participative Budget System (Sistema de Orçamento Participativo - SOP) as a case study. This system has already been introduced in Niterói (RJ) [6].

3. DISCUSSIONS

Due to the growing need to include every citizen in the digital world, it is advisable to map the languages used and accepted by the public in various communication means, so as to improve interaction with the products offered by the government. The it diagnosis of current participation initiatives and the citizens' true expectations converge on the need for an interactive environment. It is noticed that e-Democracy offers benefits for citizen and government alike. The citizens can assume a more active role in society, exercising their opinion power with ease and agility. Therefore, the digital revolution means more power for the people. For the government, unable as it is to turn its back on digital society, e-Democracy allows administration gains, transparency and more control over society through Internet-centralized data.

This model could be migrated with gains to interactive digital TV, the research on which topic has advanced greatly. However, due to high costs for the citizens and to gradual use of computers and Internet, the e-Democracy model is proposed for the Web environment. The proposed e-Democracy Model, with its high degree of interactivity, proves ideal for digital inclusion and is set to boost citizen's participation in government-related issues. Using web-based Technologies and possibilliting a real citizen participation in the governmental questions, is propitiating one Strong e-Democracy Model, with consensus, public debate, opinion-maker, interactive and discussion.

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