

Web Ontology to enable e-Citizenship

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Abstract

This document summarizes the e-Gov ontology developed to support web agents to assist citizens to deal with the up growing services and information delivered in e_gov sites. We emphasized the role played by government agencies when become digital. This bias perspective will increase the effectiveness of computational agents finding their way around to fulfill citizens' specific needs.

Introduction

The Government plays an important role in citizens' lives either by defining norms and laws to be complied or by providing trustworthy information and services to be properly used. These actions work binding citizens in a society. Information changes, policies become outdated, laws are revised, and in summary the dialog between citizens and government must be constantly updated.

The advent of the Internet allowed Govern to let available information and services to presumably all citizens. By the nature of electronic access the problem can be focused in handling a huge volume of information under constant updating process. The user becomes responsible for constantly checking changes. As a sub-product, Govern is transferring the responsibility to make citizens aware of changes to themselves. We believe that to deal with an electronic Govern the citizen needs an electronic agent. In this context we have proposed the e_Citizen project that are currently under development. According to this approach, there will be an citizen computational agency that will take care of changes that might matter to a specific citizen to alert him, when necessary, to take action and sometimes take action in his name.

In order to allow this model to work Govern must reveal its activities model or offered services ontology. The e-Citizen project requires ontology to serve as a communication basis between government and citizens [1]. Knowledge organization [2] is a crucial activity to support ontology creation. The conceptual structure and dynamics of a government office and its organization allow rational choices towards what must be represented. There are many perspectives to build an ontology including:

- Taxonomically division and connection of e-Gov areas;
- Definition of evaluation indicators for e-Gov services;
- Assembly a hierarchical structure of e-Gov services.

The objective of this paper is to present this ontology emphasizing the role of e-Government agencies in providing information, services and a channel to let citizen participate in the government decision-making process.

e-Gov Ontology

We took an interaction-oriented approach emphasizing the information transference between citizen and government and vice-versa considering the different scenarios of interaction. As illustrated in Figure 1, an e-government (e-Gov) site interacts with citizens to either:

- Retrieve or Deliver Information
- Provide Services
- Allow Citizens to Participate in the Government Decision-Making process

No matter the scenario, there will be two actors involved: the government and the citizen. The government actor is always reliable, identified, responsible in a court of law, and aware of its responsibility. The citizens may be anonymous, although identification must be required in some interaction scenarios.

Government offices always deliver information. Information may concern norms, such as the new law prohibiting citizens to carry guns; opportunities, such as jobs and bids; or simple facts such as the new mayor's speech.

Government services may concern certification of citizens documents, such as provide social security number; resource transference such as tax refund or bill; information retrieval, such as retrieve income tax information from citizens; and customized information delivery, such as to inform a specific citizen its status concerning his debt with the government.

The Government is also ready to listen to citizens' complaints and suggestions though ombudsmen. Sometimes, it needs a direct participation in its decision-making process through voting system for instance.

Project Status

We have developed an initial ontology, as described in here that will be instantiated to express the Revenue Service. The purpose of any Revenue Service is to give taxpayers an efficient service and helping them understand and meet their tax responsibilities. More than that to apply the tax law with integrity and fairness. Citizen's role is to understand and meet tax obligations. The Secretariat of Federal Revenue role is to help the compliant taxpayers and to ensure people who are unwilling to comply pay their share.

Income taxes are taxes levied on the financial income of persons or of corporations. Taxes levied on the income of companies are called corporate taxes, corporate income taxes or corporation taxes. Secretariat of Federal Revenue activities encompasses many interspersed activities such as:

- Citizens information gathering in order to maintain and update taxpayers file records;

- Enterprises information gathering in order to maintain and update corporate taxpayers file records;
- Income tax evaluation both for individual income tax and corporation taxes;
- Fraud and tax evasion risk analysis based in different sources cross-validation;
- Notifying taxpayers taxes evaluation results;
- Transference of money for the count-chain of the customer or bank agency in case of tax restitution;
- Tax evasion control.

Additionally, we will apply this ontology to describe the census service office.

This is a 3-years project that is just beginning. We hope to show the usefulness of an ontology to allow computational agents to serve citizens to deals with electronic government services. Additionally, we expect this ontology will be used by government agencies to develop their sites.

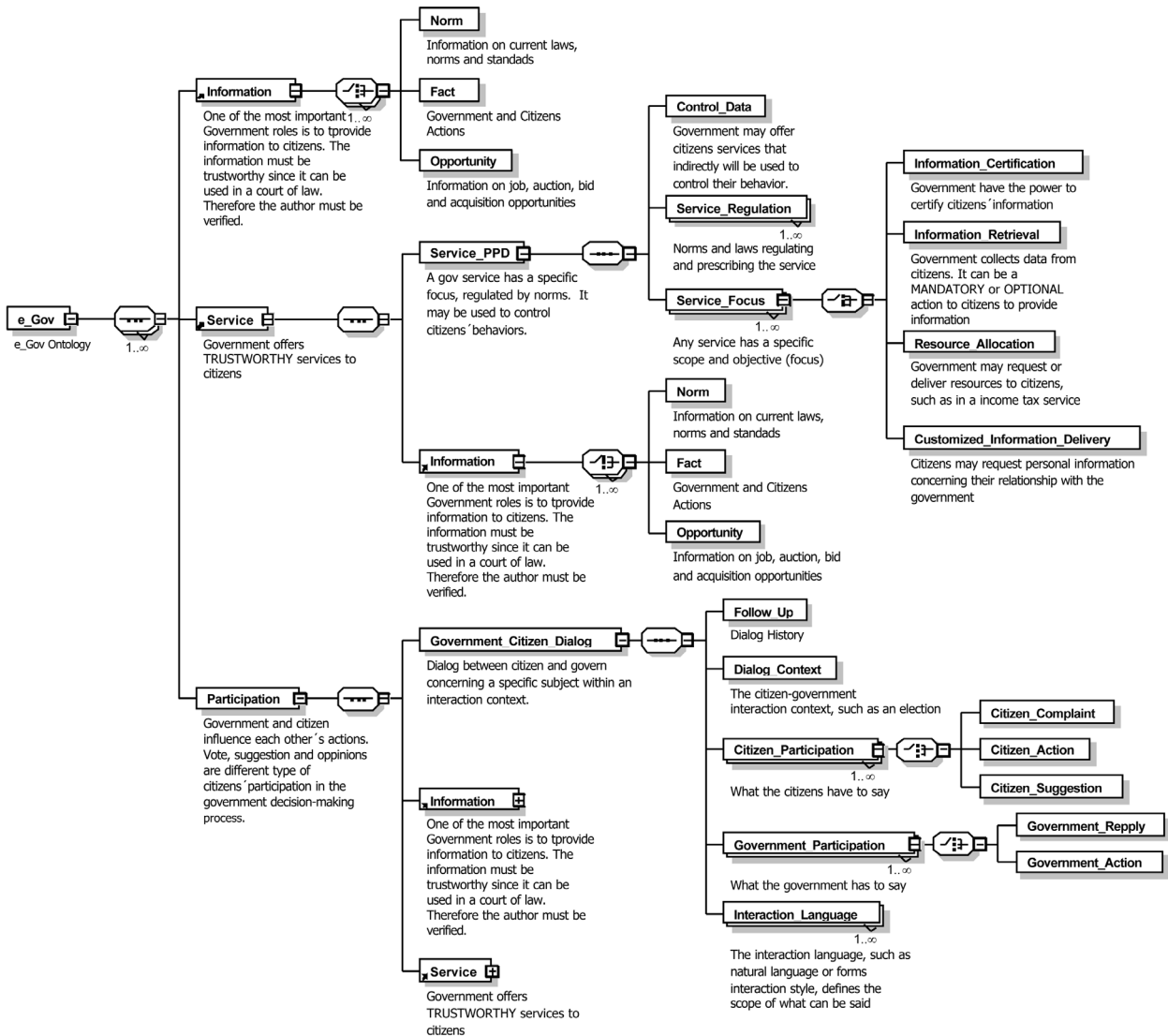


Figure 1: e-Gov Ontology

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