Strategic manifesto for the Decision Deck project

30 March 2009

The Decision Deck project aims at collaboratively developing Open Source software tools implementing Multiple Criteria Decision Aid (MCDA). Its purpose is to provide effective tools for three types of users:

- practitioners who use MCDA tools to support actual decision makers involved in real world decision problems;

- teachers who present MCDA methods in courses, for didactic purposes;

- researchers who want to test and compare methods or to develop new ones.

From a practical point of view, the Decision Deck project works on developing multiple software resources that are able to interact. Consequently, several complementary efforts focusing on different aspects contribute to Decision Decks various goals.

The project continues and expands the series of activities that have been pursued by the Decision Deck Communitiy, including at the approval date of the manifesto:

- **D2**: a rich open source Java client offering several MCDA methods, like

    - **IRIS**: outranking based sorting of alternatives into ordered classes;
    - **RUBIS** and **VIP**: outranking and additive aggregation model based methodologies for the choice decision problem,
    - **UTA-GMS/GRIP**: ranking alternatives with a set of value functions;

- **XMCDA**: a standardised XML recommandation to represent objects and data structures issued from the field of MCDA. Its main objective is to allow different MCDA algorithms to interact and be easily callable;

- **XMCDA web services**: distributed open source computational MCDA resources, like the RUBIS solver written in Python and the KAPPALAB (Choquet integral based MAVT) R library;

- **D3**: an open source rich internet application for XMCDA web services management;

- **diviz**: an open source Java client and server for XMCDA web services composition, workflow management and deployment.

All these efforts involve developments on at least one of the following research topics of the Decision Deck project:

- global architecture of MCDA systems;

- implementations and developments of MCDA algorithms;

- data models and management of MCDA objects;

- decision process modelling and management;

- graphical user interface.

In order to coordinate the various activities of the Decision Deck project, it is structured as follows:

- **The Decision Deck Consortium**: a french non profit association which steers and manages the project along the lines of this manifesto. It is headed by an administration board. The consortium is among other in charge of organising the workshops of the project every semester.

- **The Software Resources Management Groups**: they are in charge of the organisation and the management of the developments of the six identified initiatives of the Decision Deck project. Each group is coordinated by a clearly identified contact person. These management groups are in charge of organising the bi-annual developers days of the project.

- **The Specifications Committee**: under the direction of a coordinator, its role is to maintain and develop the XMCDA standard and to approve and publish suggested evolutions. The coordinator is in charge of organising the specifications meetings.

- **The Communication & Dissemination Committee**: under the direction of a coordinator, its role is to develop and maintain the websites of Decision Deck and to manage the communicational aspects of the project.