

OpenCarre, an innovative open-source IT solution for E&P software

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In Exploration and Production, the main way to test innovative methodologies and workflows is through software development. For both research needs and industrial purposes, a specific R&D project has been launched at IFP for several years, for the following reasons:

- Helping multi-disciplinary approaches to gain the best of available data;
- Capitalizing the research work done in this domain;
- Favoring synergies and communication between applications for a more and more extended and flexible workflow;
- Reducing the software development costs and satisfying basic quality requirements;
- Speeding up the transfer of the innovative workflows to the industry.

After so many years, IFP has been developing **ICarre**, its home made software infrastructure and from now on, all new generation software developed by IFP will be based on .this infrastructure.

This E&P common infrastructure supplies a set of basic components such as : data model and persistence, data manager, multiple import/export, 1 to 3D visualization tools, workflow editor and manager, connector for scientific algorithm, etc.

For researchers, the aim is to assist them in the development of software prototypes within the framework of their researches thanks to a management of the purely technical computer aspects. They can so concentrate on the core aspect of their research work to test and validate more easily new algorithms.

The use of a common environment for research prototypes and industrial products will also allow to quickly launch on the market innovative solutions proposed by the researchers at a lower cost.

The philosophy of this platform is to be closely related to published data format such as those of Rescue and OpenSpirit and to be open in order to easily build bridges with other standard tools of the domain.

From a technical point of view ICarre is based itself on *Eclipse* (<http://www.eclipse.org>) a public domain software platform today widely used in the world of the software development as well as integrated development environment (IDE) or Rich Client Platform (RCP). Other public domain components available on Web are also used by ICarre which thus benefits widely from open source products.

IFP studies today the opportunity of delivering a free version of its platform, namely OpenICarre, to a collaborative open-source exploration and production research community. In that way, well selected COTS (components off the shelf) additionally with innovative components developed by IFP will provide Industry with a comprehensive package for free.

For IFP the interests of this open source version are multiple:

- Test widely the platform;
- Familiarize the community with the concepts and the " look and feel " of its products;
- Favor the exchanges and the interoperability between products IFP and specialized plug-ins which can be finalized by research teams;
- To enrich the platform with a new variety of inputs.

For the research community of the domain and even other areas related to Geosciences, the interest would be to benefit from business oriented development environment, with an industrial quality, which could be augmented and shared with peers.

IFP is also aware that the stake in the public domain of a version of its platform requires an important preparation. Before dashing into this adventure we wish to study the impact that this action could have on the industrial version, define exactly the perimeter of the open source version and especially measure the interest of the research community for this kind of product.
