



Exploring an infrastructure in its context: the platform NapaGeo

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Improving the ability to browse geographic information is a way to empower the awareness and knowledge on risk or to make analysis faster and easier. We present here an application particularly aimed to natural risk issues which enables a browsing of geographic views which is faster and more effective than a traditional GIS approach.

Since the aim is to consider all the context surrounding an infrastructure, a very large amount of information, characterized by different spatial scale, refresh time and disciplinary field must be shown. Moreover, the platform must be used by different users, working with different roles on the territory.

We came up with a map which can be browsed with an interactive dendrogram, structured with binary scale invariant cascade at every level, classifying all the different layers with a nested tag system. Tags have to be determined according to the case in use. At each level, the user must evaluate his position between two extremes (eg: management and assessment). The choice is made using the “navigation pad”, a slider that has five positions: the nearer the user goes with respect to a pole, the more interest he has for the corresponding branch.

It's extremely important to underline that the possible views are created previously at a backoffice level, so that what the user does is to browse the views using the dendrogram; this allows to obtain a product which is quite fast and responsive. With respect to a traditional GIS experience, the user is constrained into pre-selected visualization and symbols but gains the possibility to have an updated view corresponding to his necessity within a few seconds. Another original aspect is the fact that the deeper the user goes into the classification graph, the less layer will be represented: the software aims to create a clean view, where only the essential items are shown. If the user is in an intermediate position, he will keep the information of the chosen pole, and, in addition, the data considered fundamental of the other pole. The priority tag is attributed upon the user profile, through interviews cycle. It is important to clarify, however, that the visualized layers also depend on zoom level.

In addition to graphic information, a panel reports data obtained by performing a dynamic query. This query is related to the navigation path within the dendrogram and shows the informative contents that in a traditional GIS would have been stored in the “attribute table”.

In such a way, it is possible to offer all the necessary data faster, with an interactive user experience that can be easily shared with permalinks.

We present here the first application of the software, which is developed as a case study for the levee system of the Po Plain, the major river in Italy. The platform is easy to use even without GIS knowledge and can help assessing land use and managing risk scenarios.