Mapmaking by the Millions

Today maps can be created and used by any individual with just a modest stock of computing skills, from virtually any location on Earth and for almost any purpose. Under this new mapmaking paradigm, users are often present at the location of interest and producing maps that address instantaneously arising needs. Cartographic data may be digitally and wirelessly delivered in finalised form to the device in the hands of the user, or he may derive the requested visualisation from downloaded data in situ. Rapid advances in technologies have enabled this revolution in mapmaking by the millions. One such prominent advance is the possibility to derive maps very quickly, immediately after data acquisition, by internet access and dissemination. Real-time data handling and visualisation are other significant developments, as are location-based services, mobile cartography and augmented reality.

Abstracting Reality

While the above advances have enabled significant progress in the design and implementation of new map production techniques over the past decade, many cartographic principles remain unchanged, the most important one being that maps are an abstraction of reality. Visualisation of selected information means some real-life features are depicted more prominently than others, while many might not be depicted at all. Abstracting reality adds to the power of a map, which is a very efficient means of making complex situations understandable and interpretable.

Recovery and Protection

Abstraction is essential in all stages of the disaster management cycle. The recovery phase demands promptly produced imagery of the affected area using depictions which allow emergency teams to understand the situation on the ground from a glance at the maps. Important ongoing developments supporting rescue work in the recovery phase are map derivation technologies, crowd sourcing and neo-cartography techniques and location-based services. The role of cartography in the protection phase of the disaster-management cycle has always been crucial. Risk maps enable governors, decision-makers, experts and the public alike to understand the kind and levels of risk in near and distant surroundings. Modern cartography allows the general public to voluntarily participate in modelling and visualisation of potential risks to their neighbourhood. Modern cartography also helps quickly disseminate crucial information.

Cartographic communities are conducting dedicated research, projects and applications development. A focus of those activities is the Commission on Cartography in Early Warning and Crisis Management of the International Cartographic Association (ICA).

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