Mapping in the 21st Century

[Name of the Writer]

[Name of the Institution]

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***Introduction***

With the advancement in technology, almost every field is blooming and making use of its latest perks. By using the updated and modern strategies of the latest technology, various fields have made progress by leaps and bounds. Technology is being used in almost every field and hence it has become an important necessity of recent times; no field can go ahead or even survive without it. Many instances can be seen in the practical, business or academic world where the latest technology has aided significantly in taking the company or the organization to heights. One of the latest examples where a field or subject has been greatly benefitted by the advancement in technology is Geography. Talking specifically, the developments in the area of map-making and designing have proven significantly beneficial in improving the understanding of the concepts related to Geography and solving many issues in the subject. These latest techniques in mapping play a vital role in designing and modifying multiple governance strategies and have become an essential part of organizing large data set. These maps or mapping techniques are in fact the best way to produce and understand the complex data sets in the modern computer systems.

***Discussion***

The field of geography has always been incomplete without the usage of maps. Maps are to geography like oxygen is to the human body. Maps have always played a significant role in explaining various factors related to geography like the specific location, type of land or the distance or total area of that specific location. The process of creating and crafting maps, to for the purpose of communicating geographic, topographic and spatial information effectively, is known as Cartography[[1]](#footnote-2). It can simply be referred to as “the art of map-making”. Cartography is both an art and a science. As explained earlier, Geography and cartography are very closely related fields, each dependent on the other to clearly define the location and position of a place on the surface of Earth. These maps may be of different types and sizes.

 The area of geography, especially the geospatial domain, is witnessing and handling much more data as compared to any era in the past. This tough task is being performed by highly sensitive sensors that are used to measure, process and store the data in highly functional databases. These databases are further linked to other databases forming highly integrated spatial data infrastructures that run on set strict standards and accepted rules. These expertly modified and highly integrated maps are used in the data modeling, data acquisitions, data validation, and dissemination of information across various mediums. These may include, cloud computing, service-oriented architectures, augmented reality and location-based services.

 The inculcation and use of the maps, especially modern techniques of mapping make it extremely easy and comfortable in sorting the hug sets of data. These techniques untangle the complex data sets and retrieve the relevant and useful data so that it can be used in an efficient manner. It helps a lot while facing a particular scenario in which it becomes a hectic job to mine and retrieve data related to that scenario.

 Moreover, geography is making and applying more and more of a technology-driven approach while creating and designing maps. The development of various applications has become incredibly easy due to the presence of latest technology in mapping as the new technology is readily available and quick[[2]](#footnote-3). These latest mapping techniques are much more convenient and user-friendly and give much more efficient results.

 It would not be wrong if it is said that without maps, a user or professional is “spatially blind”. In geography, it is extremely important to know about spatial relations and the location of objects in order to have a deeper understanding of space and texture of the space. Modern techniques in mapping can allow and enable the maps to acquire data from geodata applications such as sensor networks, remote sensing, or laser scanning. In-depth analysis and understanding of structures and patterns can be achieved by the application of the strategies of smart modeling.

 The future of Cartography, in light of these latest mapping technologies is very bright. It is expected that due to the blessings of these technologies, the geospatial data will be always available to anyone, anywhere. Moreover, this will help significantly in providing the tailored data which would serve the exact purpose and fulfill the4 exact needs and demands of each individual[[3]](#footnote-4). As these Cartographic techniques are extremely attractive, there are bright chances that they will bring a hike in the users of maps. These are also expected to bring revolution in the areas of disaster management and handling crisis situations.

***Conclusion***

Hence, it can be seen that map-making and designing or Cartography and Geography, go side by side. Both the disciplines are hugely dependent on each other to explain the specific location, texture, and distance of any place. The latest technology has also touched various aspects of Cartography and made the field much easier to comprehend for the professionals and the general public. The latest techniques in Cartography have facilitated the management of spatial data in terms of acquisition, processing, storage, and dissemination. These mapping techniques make the spatial data readily available and all set for immediate use. They also assist the professional in the development of various applications related to geography and acquire and use the data in a much useful and efficient manner.

**End Notes**

1. Dent, Borden D., Jeffrey S. Torguson, and Thomas W. Hodler. *Cartography: Thematic map design*. Vol. 5. Boston: WCB/McGraw-Hill, 1999.
2. Jones, Chris B. *Geographical information systems and computer cartography*. Routledge, 2014.
3. MacEachren, Alan M., and DR Fraser Taylor, eds. *Visualization in modern cartography*. Vol. 2. Elsevier, 2013.
1. Dent, Borden D., Jeffrey S. Torguson, and Thomas W. Hodler. *Cartography: Thematic map design*. Vol. 5. Boston: WCB/McGraw-Hill, 1999. [↑](#footnote-ref-2)
2. MacEachren, Alan M., and DR Fraser Taylor, eds. *Visualization in modern cartography*. Vol. 2. Elsevier, 2013. [↑](#footnote-ref-3)
3. Jones, Chris B. *Geographical information systems and computer cartography*. Routledge, 2014. [↑](#footnote-ref-4)