NEW DEVELOPMENT ON TOURIST CARTOGRAPHY

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Abstract: With the development of modern science and technology, tourist cartography has been a very important part in the realm of modern cartography.

There are many kinds of ways and means to represent contents in tourist cartography. For instance, people can use papery or silk or electrional maps to direct them to make a tour. Furthermore, with the popularization of internet and mobile telephones, more and new methods have been used in the fields of tourist cartography. And people can use the advanced technology to have more conveniences on their tour.

With time goes on, people will have more demand on tourist cartography. More and more high-tech and new products will be used to improve the progress and development of the technology of tourist cartography.

1) Preface

With the great advance of modern technology, there are rapid development in the various realm of society. People’s standards of living have been enhanced greatly than ever. They have not simply satisfied daily basic necessities of life and have required higher demand of physical and culture content. Tourism has been popularized because people have more money and time to spend. Tourism has become an important component in the people’s spare time under this condition. When people go on a tour of tourist attraction, due to being in the strange environment they will face many problems, such as the position and distribution of showplaces or tourism routes along with the processing of contingency thing, etc (Jingwei 2003). It will much more looming large than ever in the increasingly prosperous individual budget travelling under above-mentioned condition. Some kinds of tourism maps must be provided to the many tourists in order to resolve these problems. Therefore, tourist cartography has increasingly acted as a more important and active role in the modern cartography methods and affected profoundly the holistic development of map cartography.

2) New development on tourist cartography

2.1) New development on the methods of tourist cartography

There are many methods to express and incarnate the contents in tourist cartography. In the field of medium carrier the most common one is paper besides silk, plastic and skinniness, etc. With the rapid advance of modern technique of communication and computer soft and hardware, electronic maps emerged as the times require in the 20th century which have incarnated powerful life force and was a profound revolution to traditional cartographic methods. The conception of people regard tourist cartography has changed than ever. Tourist maps are no longer restricted by traditional papery carrier which can be stored in the computer hardware. And they have more convenience in editing, printing, output and schlepping, which look brand-new for the tourists. There are limited contents in the traditional tourist maps. People can only get limited tourism information by reading maps which can not realize the function of
access each other between people and tourist maps. It is a existent flaw. Electronic tourist maps can realize and enhance the above-mentioned function and access each other between people and computers. They have held primary status in the realm of tourist cartography and presented continually rising trend.

There is new definition (Michael 2000) for the tourist cartography due to internet with the popularization of internet and the enhancement of transfer of speed of network. Internet maps appear which are new types of maps and have more probability in the application of electronic tourist maps. Map data can be stored in network servers and transmitted to the tourists with very rapid speed in the internet maps. Tourists can browse and query tourist information and know the details at any moment and can query synoptic, dietetical, resident and traffic information by the means of hyperlink. Internet maps can increase more function of access each other between people and computers and show and distribute different types and intuitionistic contents of maps more easily. Internet maps can also provide rapid methods and modes of getting tourist information to the tourists. At the same time, internet maps can be updated with relatively rapid speed and have relatively new contents, which can satisfy the tourists and attract them to buy and use to great extent.

With the rapid development of modern communication technique, mobile telephones have got great popularization which no longer were few persons’ internuncial tool. It is estimated relatively that there are there hundred million persons who have mobile telephones in China, which can bring prodigious convenience between them. With the advance of network technique, people who are on internet by making use of wireless application protocol via mobile telephones are getting more and more. The persons who are on internet by mobile telephones have exceeded those who are on internet by making use of lineate network due to schlepping and using expeditiously and relatively twopenny cost. The tourist maps can show on the small mobile telephones screen by this means. The tourists can browse and query correlative information of showplaces with more convenience. In fact, it not only can satisfy these tourists and enhance their traveling interest.

The amount of tourist maps distributed in electronic means has greatly increased owing to more and more internet users. Internet has profoundly affected the developmental trend of tourist cartography. The tourists are using the tourist maps and access them each other in a bran-new way. Those traditional products of maps will be meaningless in a way once they realize the alternating cartography via internet (Michael 2000). The correlative technologists in the realm of cartography must see clearly such developmental trend and have level-headed cognition of it. They should continuously get rid of the stale and bring forth the fresh technically and promote the technical development of tourist cartography by introducing advanced network technique to tourist cartography.

It has been beyond the traditional cartography categories for modern tourist cartography. Besides the technique of network, GPS, correlative technique of GIS and RS has more deep and extensive application in tourist cartography (Ke 2004). For example, by combining the technique of GPS and GIS, people can make electronic dynamic maps. They have realized fast orientation and matching with electronic maps in the aviation, navigation and terrestrial traffic in order to provide intuitionistic images, routes of transportation, transit status and other correlative information of the spatial position of planes and sails and vehicles at any moment. Such technique has been brought to bear in PDA. In data collection, PDA can transform some formatted data, such as MIF, SHP and DXF, to inner format in the system. Renewed data can be collected by GPS and stored in PDA. The tools of PDA have loaded in many cars in the developed countries of Europe. Tourists can ascertain the jumping-off place and destination for a journey in advance and direct them to steer well by the intuitionistic image maps in PDA which can provide the choice of multiform routes and some information of distance between two places and time that will spend during the journey. Furthermore, other information correlative to tour, such as the positions of airdromes, stations, cabarets, gas stations, marketplaces and theaters, etc can also provided in
Tourists can normally and expediently use the PDA even if they are in other countries because the traffic data which can cover one country or several countries or even the whole Europe can be loaded in PDA. It has been proved well for PDA with great convenience of using and schlepping in the practical application.

The structure figure of PDA is as follows (see figure 1):

![Functional structure figure of PDA](image)

It can extend and enrich the realm of tourist cartography by combining the technique of RS and GIS effectively which can not only provide the most effective and rapid means of information obtainment or access but also offer relatively quick cartographic methods with high quality. In addition, it can offer digital 3d image maps which can give more information correlative with showplaces with a sense of being more intuitionistic and visual and have the function of browse, query, analysis and output and so on which can attract the tourists to use such tourist maps to great extent.

### 2.2) New development on the conception of tourist cartography

The conception of tourist cartography has been converted accordingly due to the impact of market economy in the current information society (Chengwen 2000). In the past, the tourist cartographers mainly considered how to fulfill their work on schedule instead of analyse the tourists’ mentality of how to use the tourist maps they bought. The maps became focus of attention in the cartographers’ conception of tourist cartography during the course of work. Many cartographers unilaterally emphasized the preciseness and accuracy of tourist maps and seldom considered the tourists’ factual requirement and some important information correlative with showplaces due to the dominion of traditional conception of tourism cartography in their brains. Such maps were always unmeaning and limited. The tourists could only get little useful information by reading these tourist maps. It was difficult for these tourists to attract them to use such tourist maps for not satisfying their actual requirements. It would not only block the technical development of tourist cartography and produce negative influence to the evolution of tourist market.

Nowadays, the tourist cartographers should have the conception of concentrating attention the tourists and their psychoanalysis about how to use the tourist maps. First of all, they must make great efforts to build up the conception of serve the tourists’ practical needs and constantly carry out some market research besides considering and making a analysis of those tourists’ habits and mentality of reading tourist maps. At the same time, they also must think over the maps’ knowledge, interest and art which those tourists care about. In addition, they must pay attention to cultivate those
tourists’ accomplishments in order to enhance their abilities of reading tourist maps as well as improve the quality of those maps. In fact, those tourists are not only influenced by their practical tourist living but also their accomplishments and abilities of reading maps when they buy some tourist maps. Consequently, it is apparently insufficient and inefficient for those tourist cartographers to think over only how to accomplish their task of cartography and neglect to cultivate those tourists’ accomplishments and abilities of reading maps. Some tourists have correspondingly poor knowledge of maps and have some difficulty in reading maps, which can decrease the interest of reading tourist maps. The tourist cartographers must continuously strengthen to train the tourists’ accomplishments and abilities of reading maps and change their intrinsic conception of reading maps. At the same time, they must try hard to enhance the readability of tourist maps and continuously carry out reform and technical innovation to the design and content of tourist maps.

2.3) New development on the technology of tourist cartography

With the popularization of computers and development of relevant technics, there has more enormous and revolutionary influence to the technology of tourist cartography which has brought significant and revolutionary changes. The brand-new technology of tourist cartography has replaced the traditional one which has been abandoned to prodigious extent. It has realized the automatization and digitization. Computers are playing a primary and active part in the above-mentioned course. Under the sustainment of computer soft and hardware, the work such as mapping, map edit, color breakaway, plate making, drawing a design and printing, etc. can be fulfilled in the computer with more convenience of amendment and maintenance. The cartographers’ external misplay can be decreased and the precision and veracity can be enhanced in the new technology of tourist cartography. Furthermore, map decoration can also be carried through in order to enhance the aesthetic feeling of tourist maps. In the field there are some very good products, for example, map publishing system invented by American Intergraph Co., Mercator electronic cartographic publishing system invented by Belgian Barco Co. and MapCAD invented by Chinese Company, etc.

The new process of cartographic technics is as follows (see figure 2):

![Figure 2. New process of cartographic technics](image)

New process of tourist cartography is a revolution with important significance. It can release many tourist cartographers from burdensome work and realize the complete digital process of cartography. Compared to the traditional process of tourist cartography, its merit mainly incarnates as follows:
a. It can quicken the speed of map facture and shorten the period of map drawing.

b. It can enhance the quality of map drawing.

c. It can expediently update finished graphics files and store them in the computer or disk and compact disc which can be convenient for establishing map database and managing map data uniformly.

d. It can realize the process control of absolute digitization in order to realize standardization and criterion.

e. It can combine to GIS and electronic publishing and realize the diversification of cartographic product.

3) Prospect of tourist cartography

With the rapid development of information technique in the world, there will be more high-tech challenge and impact of market economy to tourist cartography. At the same time, tourist cartography will face more demand about its development and have some evolutive chance along with the incessant technical progress of GIS, GPS and RS and the service standard of tourist.

3.1 Combination of multisubject technique

Tourist cartography will much more combine to the technique of GIS, GPS and RS. The technical system will be established with the technique promotion of computer soft and hardware, in which it can realize the more combination of computer cartography and computer publication system. For tourist cartography and its product, it will further realize the popular and digital and marketable goal. At the same time, there will be more and mixed cartographic methods of tourist cartography which will enrich the cartography greatly.

3.2 There will be more idea of human nature to incarnate in tourist cartography

For many cartographers, the tourists' practice need is the principal factor that must be considered in the routine work. With the incessant progress of physical and psychic standards of living, there will be more material and psychic changes about tourism and more ceaseless improvement of tourists’ consumers standards, which requires the tourist cartographers must carry through some inquisition and research and keep close watch on the developmental trend of tourist market and analyse the tourists’ mental changes. At last, they must have the cartographic concept of tourists oriented and continually update the products in many aspects at any moment in order to attract the tourists and have a definite object in view.

3.3 It is the trend for the products of tourist cartography to develop 3d image maps

Compared to the traditional products of tourist cartography, there have more intuitionistic feel about 3d image maps. They have the feeling of being personally on the scene to many tourists which can make them acceptable and comprehensive. And they will attract the tourists’ attention and stimulate them to consume much more if they can further combine to the technic of virtual reality. Meanwhile, it can enhance the tourists’ abilities to read tourist map. On the other hand, the cartographers’ positivity will be enhanced to some extent and urge these technical personnels to get rid of the stale and bring forth the fresh ceaselessly and improve the quality of tourist map because of the requirement intense of market to tourist products. At last, there will be more rapid and in-depth development for the tourist cartography in the
future.

References


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