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Implementation for Mobile Place-Related Content of Maps and Audios with Storyboard

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1. Backgrounds and Problems

Digital Map Services are getting popular among not only science research, but also our daily life. People think that these services are useful for viewing and recording simple place-related information includes photos and descriptions. Common digital map services, however, have following main two problems. Firstly, users' photos and descriptions of maps are connected with only points of interest. It is often fragmentary and monotonous information. In addition, these photos and descriptions do not contain sequential stories and place-related guidance. Secondly, when users walk outdoors with content of mobile digital maps, they sometimes struggle to find their ways and they always have to gaze a map for acquiring place-related information. It is not suitable for outdoors users to achieve smoothly travel and gain rich stories about places.

2. Purposes and Methods

2.1. Audio Tours with Mobile maPodWalk Caster

In our research, to solve the two main problems, we have implemented a new mobile application named Mobile maPodWalk Caster. It records and displays maps and audio tours with human narrations. These narrations are synchronized and visualized with tours' route. Users view and listen to the location-based audio tours by controlling a timeline and a map interface of Mobile maPodWalk Caster. With walking along content's route, users can easily check if they get lost their ways by watching a map with the user's current position and a photo related with the current place and by listening to an audio playback for getting information of places,. Mobile maPodWalk Caster has common digital map functions such as displaying maps, changing scale of maps, providing current positions using GPS, showing direction with a digital compass. We call the representation of mappings with freely changing its spatial extent geocentric mapping mode on the service. On the other hand, the representation of mappings with displaying the current position of the user at the center of a screen is called egocentric mapping mode. The mode allows a user to obtain right information easily from the sreen of the device. Another useful feature of Mobile maPodWalk Caster is the function of importing and displaying user made and selected background maps such as illustration maps and maps of guidebooks.

2.2. Storyboard of Moile maPodWalk Caster

We introduce a significant function named storyboard for enhancing capability of representing place-related content. The storyboard provides sets of visual animation effects with photo slides, short texts and visual arrows related with directions of subjects. These visual effects are managed with a list of storyline and displayed on time and positions of the audio tours.

3. Conclusions

People are familiar with audio content such as radio and music. They, however, did not have methods to relate audio content with paper maps. With maPodWalk, people can have a confortable envirionment to easily gain the information from audio and maps with mobile devices. In addition, functions of storyboard and user made background maps of maPodWalk enable enhanced capability for cartography and spatial recognize. We are going to prove that the framework of maPodWalk is useful for not only recording place-related information, but also digital education and digital storytelling purpose.

Keywords: audio tour, user-generated content, geomedia, location based service, digital storytelling

Audio Tour with Geocentric Map　　Egocentric Map with Text Animation

Fig. Screenshots of maPodWalk Caster with iPhone

Map Images: ZENRIN Co. Ltd