

Abstract of Master's Thesis Academic Year 2016

**The Study of Succession using BIM in Traditional Houses of Taiwanese Aborigines
: In the Case of Traditional Houses of Tao People in Orchid Island**

Summary :

In every region of the world, there have been increasing cases facing a difficult problem of how to maintain the locality and develop it in this globalizing society. People, goods and capital come and go frequently all over the regions, and people's values have been homogenized with the expansion of social networks. In the field of architecture, it is getting hard to find the characteristics of the region

The number of traditional houses in Orchid Island of Taiwan, which is the subject site of this research, has also been declining. When I first visited this island, I felt a vague sense of discomfort while seeing the row of houses of no-traditional and ill-assorted at all, this sense has triggered the start of this research. And I felt the orchid's people seems to have the conflicts between the idea of conservation of traditional houses and not having been doing so.

Many of the traditional buildings use local materials, construction techniques and own spatial style also fit the place. In addition, traditional architecture contains a lot of regional cultural thought and it also can be said as an accumulation of the great ancestral wisdom, While preservation activities of traditional architecture are seen in various places for the purpose of cultural protection, The aim of this research is to build out the methodology of cultural succession in traditional houses in Orchid Island.

Through the observation of participants at the construction site and hearing survey at the region, I discovered that the problem of the decline of the succession of traditional houses was due to "the vulnerability of the foundation for the tradition succession and the change of values "In the past, they had inherited the traditional methods and techniques by oral tradition, but it is difficult to sustain them with this oral way because it requires sufficient time and place. If I use the information technology, it is useful to get knowledge anytime and anywhere.

I had designed an original BIM (Building Information Modeling) for Tao traditional houses, and I examined the effectiveness of BIM for Tao people to construct their traditional houses through the miniature model experiments and the local survey of their needs for BIM. It suggests that BIM is an useful tool for the cultural succession, There are few cases of using BIM for traditional construction in the literature, but it must be worth using BIM for building traditional houses.

This is because BIM has technologies that can contribute to (1) "extraction of tradition", (2) "efficiency of work", and (3) "creation of a developmental tradition". On the process of using BIM to construct a house, we could identify the essence of tradition and find inherited tradition in a house that was rebuilt in real space. And we would be able to create a space where we will sustainably rebuild and develop the regional tradition. This research is only the initial research that presented a methodology to keep Tao traditional houses inherited.

Keywords:

1.Orchid Island 2.Tao people 3.Traditional houses 4. Culture succession 5. BIM

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