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## Analysis of Alley Space in Kyoto

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The alleys in Japan are showing the formation and change of the city. And they are the symbol of history and culture which cities have. Kyoto has traced various changes from the ancient time as a historical city. And the alleys have accumulated local histories. Therefore, the alleys in the historical city have reached to the present reflecting people's activities of each age.

The streets on square grids are formed in the urban district of Kyoto. There are many alleys which can be passed through a block between the street. They are called "Ro-ji." The alley spaces in Kyoto have the features like the stone pavement and the townhouses called "machiya" and are in the spotlight. In this study, the authors paid their attention to alley spaces in Kyoto.

Presently, there are some problems in the alleys. One is that the efficiency of disaster prevention is low. It cannot be passed by the urgent vehicle like the fire engine because of the narrow width less than four meters. It is effective to widen the alleys to maintain the functions of disaster prevention. But it lose the special atmosphere in alley spaces. Therefore, it is important to improve the problems while maintaining this atmosphere. So, it is the purpose of this study to determine the atmosphere in alley spaces.

The control urban area where consists of four ward, Kamigyo, Nakagyo, Shimogyo, and Higashiyama Ward, is selected as a case study area. The authors used the data which are investigated by the city of Kyoto to extract the alleys in the case study area. The distribution of alleys is analyzed on GIS, and the crowded areas are found. Then, the spatial elements of alleys are extracted on the typical alley there.

Keywords: geo-information technology, Kyoto, alley space, typical alley