

A STUDY ON PROBABILISTIC MODEL OF PREFERENCE FOR SPACE USING BAYESIAN NETWORK - A case of planning for special exhibition Part2-

The purpose of this paper is to provide a method for the construction of a probabilistic model of preference for space. Bayesian networks are expected to construct probabilistic models that include the uncertainty of human behavior for prediction and decision-making. We supposed that the spatial elements which composed the exhibition were acting together to influence the preference for space. Then, we applied Bayesian networks to construct graphical models that represented the correlation between preferences and spatial elements like circulation, aspect ratio, wall layout, exhibition system layout and so on. The relationship between these spatial elements and the difference of preference for a space are easily understood by visual analysis of graph structures. Furthermore, by executing the probabilistic reasoning of Bayesian networks on these models, we deduced a combination of spatial elements that are expected to be preferred in high probability. This is an acquirement of knowledge for the design of spaces.