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# Spatial analysis of users movement pattern and its socialization on public facilities and environment through the ESVA

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#### **Abstract**

The aim of developing spatial analysis of user movement pattern analysis and socialization is to ensure socializing comfort at the user environment. User Movement patterns and socialization need to be estimated in order to avoid any disturbance in obtaining user comfort during in its environment. Research on this spatial analysis was held on public facilities in Surabaya and Malang City. In the analysis on various public facilities was concluded that comfort sense was influenced by facilities and infrastructure, spacious place to socialize, view and direction in order to control the circulation flow and the ability to accept a variety of activities that are likely arise. Results of this research showed that the type of movement and socialization can be known through the Environment Socialization Values Analysis (ESVA). The value results of the ESVA are determined from the average number of socialization types that occurs and the average of user member number.

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Keywords: spatial; analysis; movement; socialization; circulation; activities

#### 1. Introduction

Research in the field of spatial indispensable for a variety of analysis advantages. Some advantages of this analysis is to provide a clear picture of the environment's ability to support the needs of its users. Other uses of this analysis is to predict the density and avoid disasters that can cause. Furthermore, spatial analysis capabilities in

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predicting the ability of the environment should still be developed to the customs and culture of the people who use them. Thus, the focus of the activities, habits and culture of the social environment will be discussed in more depth.

#### 2. The need for spatial research on the building and the environment

Spatial analysis and research are very useful in measuring human comfort in the move in its environment. In addition Environment Socialization Value Analysis (ESVA) has other uses as a measure of the ability of the environment to accommodate and serve the needs of users in the environment. Two ESVA capabilities will provide a result that is environmental regulation requires consideration of the two sides between the user and the environment itself. The ability to adjust to each other both have directives that culture also is the deciding factor between the two forms of adjustment. The culture of the user is then interesting to explore and investigate its influence in affecting the environment settings. Culture conditions differ among users will add uniqueness when people are in their environment. A fusion of different cultures on the environment should be analyzed further usage patterns and trends in activity with the use of the environment.

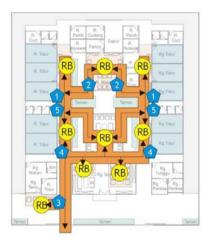


Fig. 1. The Example of ESVA spatial analysis with socialization patterns in Surabaya Source image: Wardhana (2012)

In using the environment, users are strongly considering various factors into consideration. This is because the culture of using environment shaped and influenced by the surrounding environmental conditions. The environment used by the user always also involves other users with cultural backgrounds different. Thus, the combination of culture will be greatly affects human activities in socializing in the environment.

Human activity with cultural factors as constituent will be shown with a pattern of activity that has been patterned. This has been investigated by Wardhana (2012 and 2014). The pattern then becomes a very powerful influence state governance environment used in socializing. The arrangement of furniture and other amenities will make in social behavior pattern. Learn from this that we can predict the causes and circumstances of human activity on the environment or building too (Wardhana, Soemarno, & Prijotomo, 2012).

#### 3. Methods

#### 3.1. The advantages and disadvantages of various kinds of research in the field of spatial

Several studies in the field of spatial analysis has begun. Some of these studies was conducted by Izuyama (2010), Percival (2002), Judith (1986), Tversky (2003), Minam and Tanaka (1995), and Sepe (2009). Those studies showed activity that occurs in an environment at certain times. If the difference time of the research, it will be very

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