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Monitoring street network using high-resolution remote sensing data for urban morphology study. Case study: The historic city of melaka (Conference Paper)

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Abstract

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This paper is based on the study of morphological changes in Melaka, Malaysia. In order to identify the morphology of this city, the street network is one of the elements that can help to determine the evolutionary of urban form and structure. The primary objective of this paper is to examine the movement and direction of the street pattern in which influenced the morphology of the city from the year 1993 to 2016. Also, the character of the Historic City of Melaka is strengthened by the unique townscape qualities of the streets and the buildings that shaped the quality of space created by these streets. Thus, three series of satellite images on the year 1993, 2005 and 2015 from SPOT satellite have been used in detecting the development of street network pattern aided by remote sensing and GIS software. This paper will concentrate on extracting the street in 20 years, and a comparison of the street pattern will be taken into consideration to examine the direction of the expansion of Melaka city. The finding shows that the streets expansion growth fast as the more settlement were built along this process. The street expansion was merely influenced by the location of the Melaka which near to Malacca Straits and as a port for trade sector, thus, the movement of streets expanding inwards to the inner city and along the shoreline. In conclusion, street network considers as one of the principle tools in the urbanisation process that provides understanding on how the cities are shaped and develop to have dynamic cities.

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