**Abstract**

The construction of Transamazon Highway started in the decade of 1970 intending to integrate the northwestern and northern Brazilian’s regions and to colonize the Amazon. For this purpose, settlements projects were made by the federal government along that highway, which led to rapid population growing and to an intense urbanization process in the region. The urban process is spread out within the territory and every spatial unit of human occupation is part of an urbanized network structuring an extensive urbanization process. The aim of this project is to identify the spatial units of human occupation and to qualify them according its typology. The study site is along Transamazon Highway in the municipalities of Altamira, Brasil Novo, Medicilândia and Uruará, in Pará state, Brazil. A 60 kilometers buffer was created from the Transamazon Highway, outlining the study area, representing the zone where settlements were projected by the federal government in the early highway construction design. Landsat-5 TM images will be segmented and classified with Battaccharyya distance classifier to identify the spatial units of human occupation. High resolution RapidEye images will be used to describe these spatial units of human occupation according to its typology, considering the most important aspects of the spatial units of human occupation in Amazon, by means of the Object-Based Image Analysis (OBIA) approach, which is a well established method for classifying high resolution images of urban areas.

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