# Creation of river network model for thematic map using GIS technology

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**Abstract.** The issues of creating a model of the Mongolian river network as a basis for thematic maps using GIS technologies are highlighted. The characteristic of the river network of Mongolia is considered, because when constructing a digital model, it is necessary to convey its density and structure. Digital relief models (DEM) are widely used in the creation and updating of hydrological models of the surface. As the initial information for the creation of the DEM of Mongolia, the satellite images of SRTM of spatial resolution with a step of 30x30 square meters, which are used, are in the public domain. On the basis of this DEM, a new model has also been created of the river-only commercial network of the Khentii district of the Aimag of outer Mongolia for thematic mapping by means of GIS technologies. The order of the river distribution network development was determined by the features of the Strahler method in ArcGIS Spatial Distribution Analyst using special tool "Hydrology". As the result of study a vector hydrographic economic model with a database containing information on river networks is created. The object of the study is the river network of the Khentii district of the Aimag of outer Mongolia, belonging to the Pacific Basin.

**Keywords:** satellite trade images, GIS technology features, digital relief model, of the river network system model, a thematic map

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