

## RESOLUTION ITU-R 40-3\*

### **Worldwide databases of terrain height and surface features**

(1997-2003-2007-2012)

The ITU Radiocommunication Assembly,

*considering*

- a) that there is a requirement for planning purposes for improved worldwide methods of predicting field strength which take account of terrain height and surface features (including ground cover such as buildings, vegetation, etc.);
- b) that digital maps of terrain height are now widely available with various data formats and resolutions, and that maps with 1 arc second resolution in latitude and longitude are available on a global basis;
- c) that propagation predictions are improved by the inclusion of more detailed information on terrain heights and surface features and suitable digital maps are becoming available nationally;
- d) that the availability of digital maps of terrain height and surface features would be of considerable benefit to developing countries in the planning of their existing and newly introduced services;
- e) that the use of terrain height data may optimize technical studies and assist national spectrum management;
- f) that Radiocommunication Study Group 3 has an active work programme concerning the development of improved prediction methods,

*resolves*

- 1 that a terrain database with a 1 arc second horizontal resolution in latitude and longitude is suitable for worldwide methods of propagation prediction in the frequency range above 30 MHz;
- 2 that administrations should review the terrain data available in this format, and should provide additional data with more information on surface features and with regular updates as necessary to account for development, so as to complete the worldwide extent of the database;
- 3 that administrations should be encouraged to make these terrain databases freely available for ITU purposes;
- 4 that administrations should encourage organizations involved in the production of terrain maps to produce databases of terrain height and surface features with a resolution equal to or better than currently available;
- 5 that administrations are encouraged to use terrain height for radio propagation prediction and national spectrum management;

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\* This Resolution should be brought to the attention of Radiocommunication Study Group 1 for consideration of the use of a terrain database for national spectrum management purposes.

This Resolution should also be brought to the attention of the Telecommunication Development Sector.

6 that terrain heights should be used according to ITU-R Recommendations.