*Time-tested network design tools!*

# Radio Networks Design & Frequency Planning Software

Application area:

Radio network frequency planning and system design, system EMC analysis and simulation/modeling with the use of digital area maps.

NFPS software is used for design of complex space-scattered ground systems (radio communication systems, radio navigation systems, TV and radio broadcasting systems etc) in the 30 MHz -40 GHz frequency range using EMC criteria
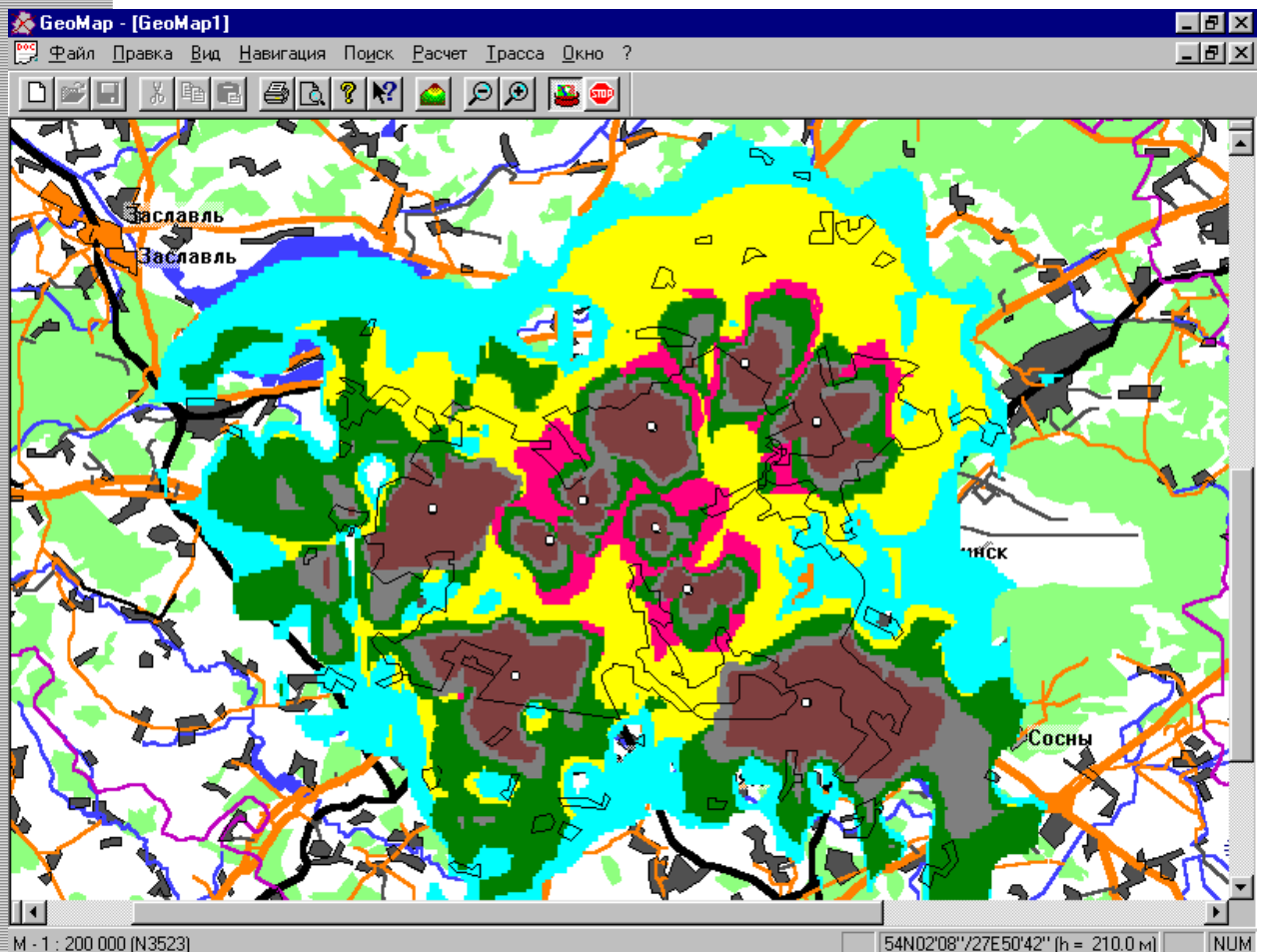
NFPS Software Structure

- **Digital Area Map database,**
- **Radio Environment database,**
- **Simulation/modeling results database,**
- **Subsystem for radio wave propagation process modeling,**
- **Subsystem for computation of coverage areas / responsibility areas / interference areas for network transmitters,**
- **Subsystem for analysis and simulation/modeling of intrasystem EMC in space-scattered radio communication networks,**
- **Subsystem for frequency plan optimization of space-scattered networks,**
- **Subsystem for results visualization, registration and output**
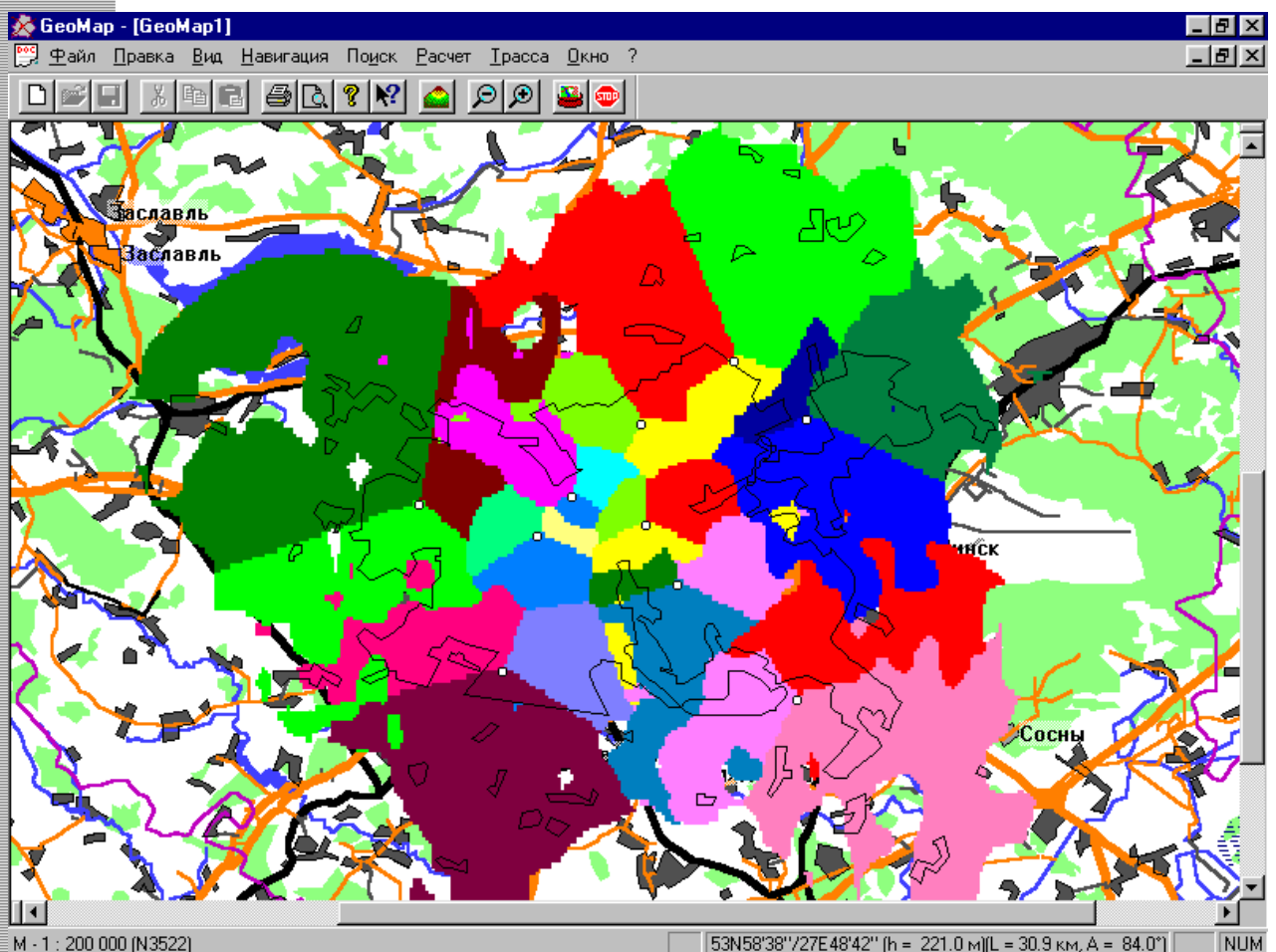
System requirements:

Pentium III-IV, 17" Monitor, Windows NT/2000/XP, $\geq$256 MB RAM, color printer

NFPS Software Functionality

- **computation of base propagation losses and radio signal levels,**
- **computation of SIR (signal-to-interference) ratios,**
- **computation and visualization of coverage and responsibility areas,**
- **computation of radio transmitter interference areas,**
- **estimation of handover boundaries,**
- **computation and visualization of radio wave propagation paths between any point (location) pairs,**
- **map legend displays reliable service areas and interference areas**
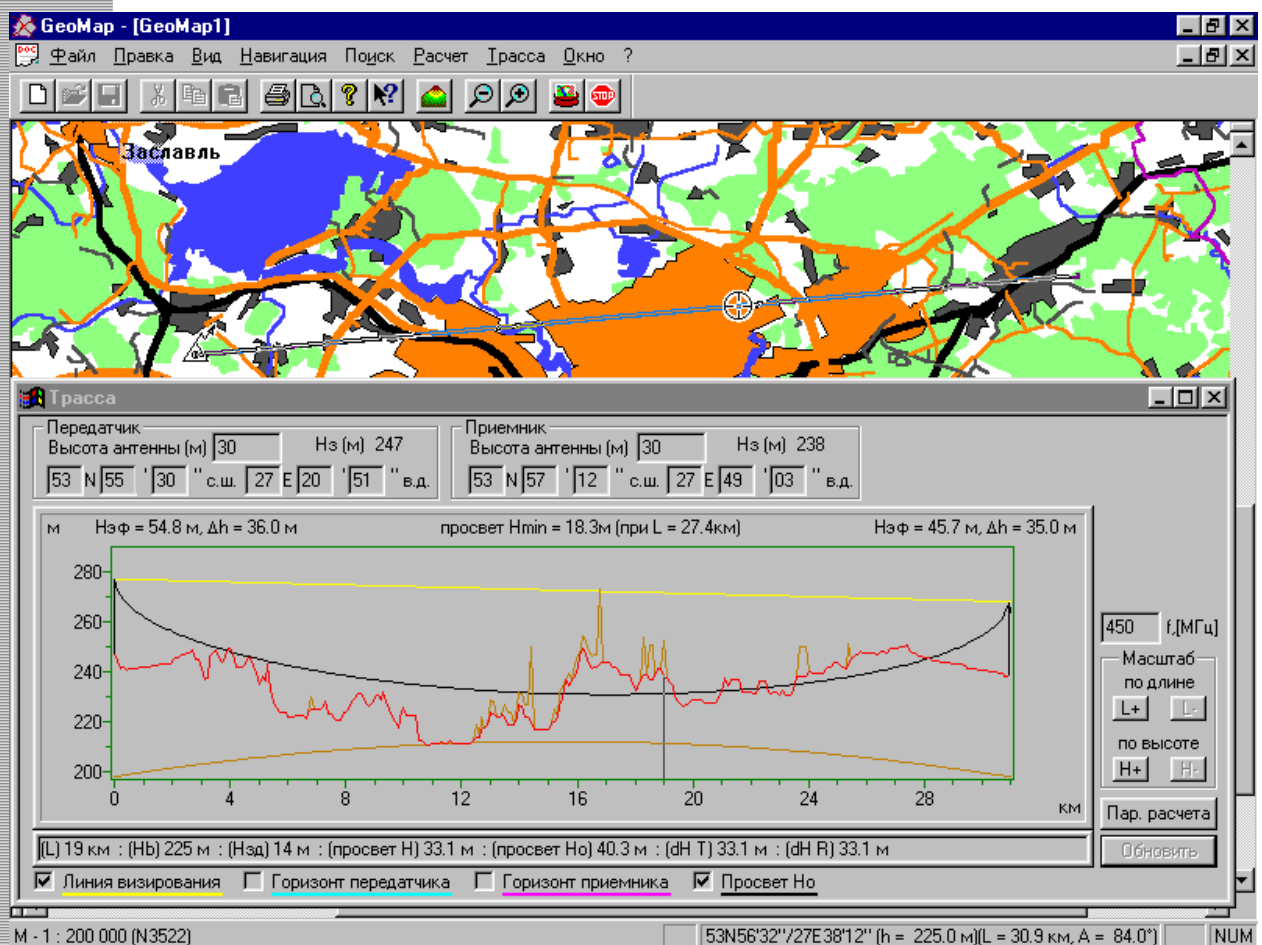
NFPS Features that make difference:

The NFPS software is a highly specialized facility for radio network design and frequency planning as well as for radio system EMC analysis and simulation/modeling

NFPS employs specialized raster representation of digital area maps ("Triple Layer" basic set of digital area map databases) and custom 3-D interpolation methods for height matrix generation
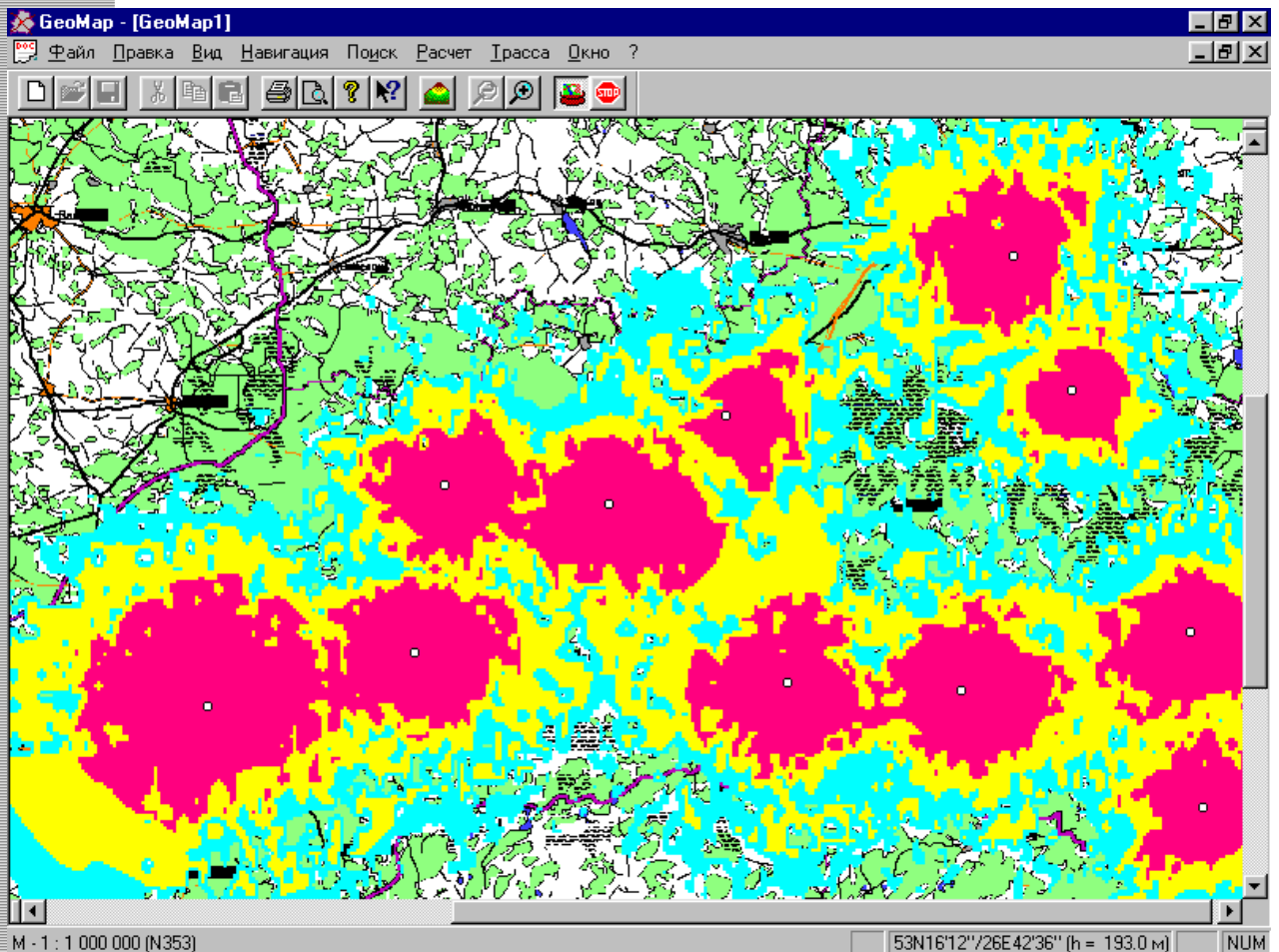
NFPS Software practical usage:

Since 1995, various versions of NFPS software have been used by a number of departments and organizations for system design, EMC analysis and EMC simulation/modeling of radio networks and systems. Over 1000 projects have been implemented in Belarus, Russia and other countries and regions, including frequency planning and system design of NMT, GSM, CDMA and AMPS cellular networks, MPT-1327 and TETRA trunking systems, POCSAG radio paging systems, fixed service systems in 0.4, 2.0, 10, 14, 17 and 24 GHz ranges, WLL systems in 2.4, 3.5 and 5.3 GHz ranges, corporative radio communication systems, TV and UHF FM broadcasting systems

For further information on *NFPS* please contact us at:

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