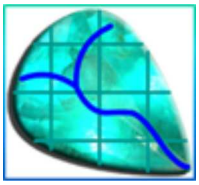
Dear colleagues a new version of distributed hydrological model **TOPKAPI-EXtended** (**TOPKAPI-X**) developed by **Idrologia e Ambiente S.r.l.** is available in three different versions: (i) as a full version at full price for professional applications (ii) as a full version at reduced cost for research and education and (iii) as a free of charge demo version of limited size.

Registration on the http://www.idrologiaeambiente.it web-site is mandatory in order to download anyone of the three different versions.

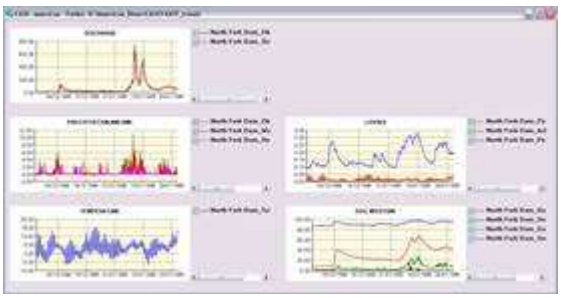
The TOPKAPI-X Model



TOPKAPI-X (**TOP**ographic and **K**inematic **AP**proximation and **I**ntegration E**X**tended) model is a deterministic physically based distributed catchment model originated by Prof. E. Todini at the University of Bologna in the '90s. The TOPKAPI approach was tested and applied for almost two decades by several groups in the world: TOPKAPI by ProGeA Srl in Italy and by HidroGaia S.L in Spain; PyTOPKAPI by Prof. Geoff Pegram in South Africa; TOPKAPI-ETHZ by Prof. Paolo Burlando in Switzerland; ArcTOP by Dr. Liu Zhiyu in China and ТОПКАПИ-ИПММС (TOPKAPI-IMMSP) by Dr. Alex Boyko in Ukraine.

The most recent version TOPKAPI-X, developed by **Idrologia e Ambiente S.r.l.**, includes, with respect to previous realizations, several additional features such as flow in eight directions instead of in four, two soil layers instead of one, Green-Ampt infiltration, a full 2-D IFD (integrated finite difference) groundwater model.

The TOPKAPI-X has a built-in lake/reservoir simulation and management module. Inflows/Outflows and distributed water lateral inflows can also be accounted for.

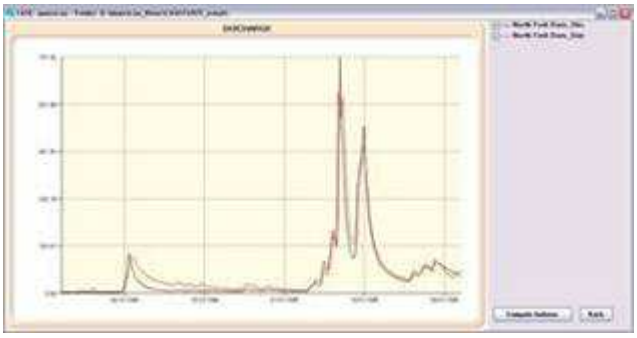


The TOPKAPI-X also includes a snow accumulation and melting module based on mass and energy balance.

The success of TOPKAPI-X lies in the integration (lumping) of point equations

into pixel equations in order to preserve and extend the physical meaning of point parameters into pixel averages. This lumping operation leads to three cascades of non-linear reservoirs equations representing the soil, the surface and the channel processes, which are then analytically integrated in time as a function of the original physically based parameters. The parameters of the model, such as slope, hydraulic conductivity, porosity, roughness, etc., can be derived from available maps, such as digital terrain maps, soil type maps and land use maps.

The TOPKAPI-X in this version has a powerful graphical interface linked to a GIS, allowing the setting up of the basin topology and the relevant input maps as well as the visualization of results. The Maps Visualizer tool is a GIS visualizer allowing the user to display the TOPKAPI-X configuration maps and to add external objects, such as ESRI Shapefiles, ESRI grid, ASCII grid, BIL images, DTED Elevation, USGS ASCII DEM, PC Raster images, ERDAS images, ECW images, GeoTIFF images, MrSID images, etc.



The TOPKAPI-X model is available (i) as a full version at full price for professional applications (ii) as a full version at reduced cost for research and education and (iii) as a free of charge demo version of limited size.

Registration on the following web-site:

http://www.idrologiaeambiente.it

is a pre-requisite to buying and downloading one of the available versions:

TOPKAPI-X PROFESSIONAL version (no restrictions). Cost 2000 € (1600 € until 31 December 2012).

TOPKAPI-X EDUCATIONAL version (limited to 10,000 cells and not inclusive of the following external Inflow/Outflow module). Cost 400 € (250 € until 31 December 2012).

TOPKAPI-X DEMO version (limited to 1000 cells and not inclusive of the following

modules: external Inflow/Outflow, Lakes/Reservoirs, Groundwater, Distributed Contributes, Real Time Forecasting modules). Free of charge.

Best regards from the Idrologia e Ambiente Srl Team

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