



Build up An Operational Flood Simulation from Existing 1D Channel Flow Works

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Several 2D flood simulations will be developed for urban area in recent years in Taiwan. Original ideas focus on the static flood maps produced by the 2D flood simulation with respect to design events, which could be useful no matter for planning or disaster awareness. However, an extra bonus is expected to see if we can reuse the 2D flood simulation framework for operational use or not. Such a project goal inspire us to setup a standard operation procedure before any progress from existing 1D channel flow works. 3 key issues are taken into account in the SOP:

1. High Resolution Terrain: A 1m resolution digital terrain model (DTM) is considered as a reference. The Channels and structures should be setup in 1D channel flow works if we can identify under such high resolution. One should examine the existing 1D channel flow works consistent with the DTM or not.
2. Meteo Stations Referenced: Real time precipitation would be send to referenced location in RR models during an operational forecast. Existing 1D channels flow works are usually specifically for design events which are not necessarily equipped with such references.
3. Time Consuming: A full scale 2D flood simulation needs a lot of computation resources. A solution should be derived within practical time limits.

Under the above consideration, some impacts and procedures will be analyzed and developed to setup the SOP for further model modification.