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Production and Distribution of Warnings - An AutoWARN Postprocessing Component

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Production and Distribution of Warnings -An AutoWARN-Postprocessing-Component

By means of ASE (AutoWARN Status Editor), the interactive component of AutoWARN, the forecaster determines areas of meteorological warnings (WSU – Warn Status Units) by drawing geo-referenced polygons. Beside valid time and relevant altitude range the forecaster assigns several attributes (e.g. values for gusts, precipitation or expected hail size) to every WSU.

Now, PVW (Production and Distribution of Warnings, German: Produktion und Verteilung von Warnungen) tackles the task of generating customer friendly warnings based on the information of WSUs by processing the following steps:

- Considering the altitude the polygon will be intersected with several warning cells (rural districts, communes, watershed areas, free defined areas of warning interest, etc.).

- By assigning ranks and weights to all possible attributes, consistency in contents can be established in the affected warning cells. (Intermediate product: "Mapped Warning Status")

- Internal and customer-specific regulations have to be taken into account (specific lead time, minimum and maximum valid duration, minimum lag between two identical warning levels, etc.).

- After matching the new processed warning status ("Product Warning Status") with the already existing the "Recently Changed Status" is created containing information for new edition, amendment or cancelation of warnings.

Based on all these status information, exporters generate different warning products in customer-specific formats and requirements:

- The usual warning text format is provided by linking attributes with (internationalized) text passages. SMS-Texts are produced in a similar way.

- The actual status is collected in a warning-overview for the area of interest.

- Additionally, warnings are generated in the machine-readable xml-code CAP ("Common Alerting Protocol")

- Warnings are visualised in combined products of graphic and text.

- The actual warning status is stored in a database for the geoserver of DWD and can be used as WMS and WMFS (e.g. Internet or Apps)

The presentation will show the workflow, the steps during creation of the actual "Product Warning Status", some identified problems and their solution, as well as examples of warning products that will become operational in this year.