


## Diana an open source production and visualisation package

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Diana is developed at the Norwegian Meteorological Institute, and is freely available under the terms of the GPL license. Since 2001, Diana has been used operationally in forecasting and research. The noninteractive part of the software is used as a graphical engine for both batch production and in WMS (Web Map Services) implementations. A formal cooperation for further development of Diana, databases and data quality control has been established with the Swedish Meteorological and Hydrological Institute. The main new developments are on grid editing, WMS, and support for more standard data formats. A prototype of field editing has been developed. It is based on algorithms which calculate the modifications within an area using a script language. Consequently, the modifications are reusable and traceable.



### Diana

- Production and Visualisation Package
- Developed at the Norwegian Meteorological Institute, met.no
- Used operationally since 2001
- Also used by researchers
- Released as open source (GPL license) May 2006

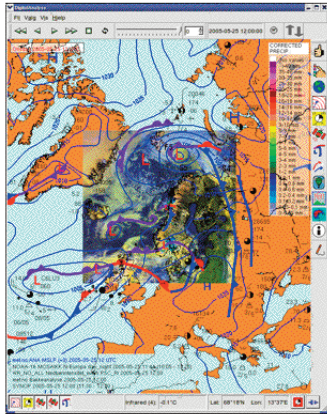
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### Diana

#### Visualisation

- Fields
- Satellite and radar images
- Surface observations
- Soundings
- Cross Sections
- Trajectories in isosurfaces
- Forecast products



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## DIANA



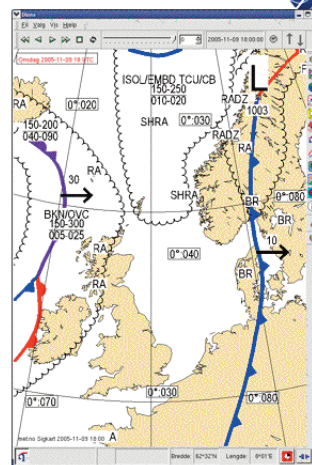
- Tailored for operational use in a forecasting environment
- Small development crew in close cooperation with forecasters
- Fast development cycle - monthly updates
- A formal cooperation with SMHI
  - further development of Diana
  - Includes databases and data quality control

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## DIANA

### Interactive tools

- Field modification
- Drawing of fronts, weather symbols, etc.
- Data visualisation is fully available



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## New forecast production system



- Product generation from a gridded database
- Possible to manually correct the database
- Fulfil, and enhance, user needs and demands
- Work as a tool for finding systematic model errors

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## The forecast will be based on:

- High resolution deterministic model
  - to resolve severe weather features in complex topography
- Ensemble prediction system
  - probability forecasts
- Human forecaster
  - compare models
  - find sensitive areas
  - check observation
  - determine risk of severe weather
  - Make corrections when the models are wrong

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## New web site - yr.no

- Weather service for the public; free access
- Joint effort by met.no and NRK
  - (the Norwegian Broadcasting Corporation)
- Forecasts (10 days) and observations
  - text, symbols and graphs
  - advanced (WMS) map clients
  - download as XML
  - Searchable by geographic location

Norwegian Meteorological Institute [met.no](http://met.no)



## Web Map Services

- WMS-diana
  - CGI-wrapper for batch-Diana
  - Receives WMS-request
  - Generates input-file for batch-diana
  - Bach-diana creates image
  - WMS-Diana returns image to client
- Diana makes new plots when zooming or panning the map
- Full support of every format Diana supports

Norwegian Meteorological Institute [met.no](http://met.no)