




Water Coach Workshop

Training for operational forecasting systems

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Water Coach



Session start.

March 12th, 4 o'clock in the morning, you are the first person to arrive at the location. Previously, a fellow hydrologist issued a pre-warning for Vlissingen including an expected high water level of 320 cm on March 11, around 4 o'clock. The actual water level for this high tide was 292 cm NAP.

Your colleague, who has been in charge, became ill unexpectedly and will not be able to perform the session. He requested you to take over his shift and to make the forecast as a tidal hydrologist.

Task: Start FEWS and familiarize yourself with the situation.

Water Coach - forecast

sector	station	date	time astro HW	astro water level [cm]	SVSD forecast [cm]
Scheide	Vlissingen	March 12	17:16	237	
West Holland	Hoek van Holland	March 12	18:01	122	

Water Coach – Scenario and Script

Water Coach consists of

- Scenario (weather and water)
- Script (things that can be adjusted to aid the learning objective)

The Water Coach can be used in a

- Exercise (team)
 - > Probably only scenario, not the script
 - > Focus on team interaction, communication
- Training (single player)
 - > Both scenario and script
 - > Focus on training skills

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Water Coach – Learning Objectives

What are the learning objectives of the Water Coach?

- Forecast
 - > Communication
 - ask the right questions (gather information)
 - supply clear information
 - deal with interruptions (press, etc)
 - > Deal with events (less relevant)
 - failing of measurements, tools, phone lines, etc
 - events that influence the work like a sinking ship, failing measure, etc

How can we reach these learning objectives?

- Select (and edit) interesting scenario
- Adapt the script to the needs of the player

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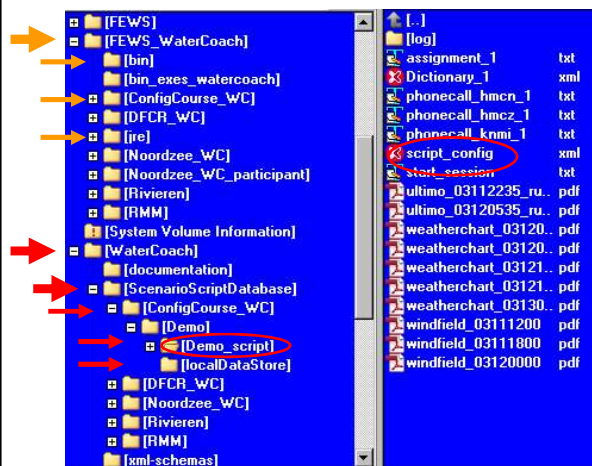
Set-up training environment

- ➔ FEWS_WaterCoach folder
 - ➔ *Example* folder with SA copy of operational system ([some changes necessary](#))
 - ➔ bin folder (could be a new version with new functionality you want to train)
 - Add the *Example*.exe and *Example*.jpic file to start the *Example* system.
 - ➔ jre folder (copy of the jre folder in the operational FEWS system)
- ➔ WaterCoach folder
 - Add the application_config.xml [*Example*.xml](#)
 - Add an *Example*.exe and [*Example*.jpic](#) file to start the WaterCoach
- ➔ ScenarioScriptDatabase folder
 - ➔ *Example* folder for the system
 - *Scenario_1* folder for the (first) scenario
 - ➔ localDataStore folder for this Scenario (copy LDS from OC)
 - ➔ *Script_1* folder for the (first) script for this specific scenario
 - Add the script configuration [script_config.xml](#)

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Scenario/Script database

Creating a local data store for FEWS, which is put in scenario/script database:



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Exercises – Set-up Environment

Create the folder structure as described

<http://publicwiki.deltares.nl/display/EAT/How+to+set+up+a+training>

Modify the stand alone version of your FEWS system

<http://publicwiki.deltares.nl/display/EAT/Application+configuration>

section: Fews Configuration

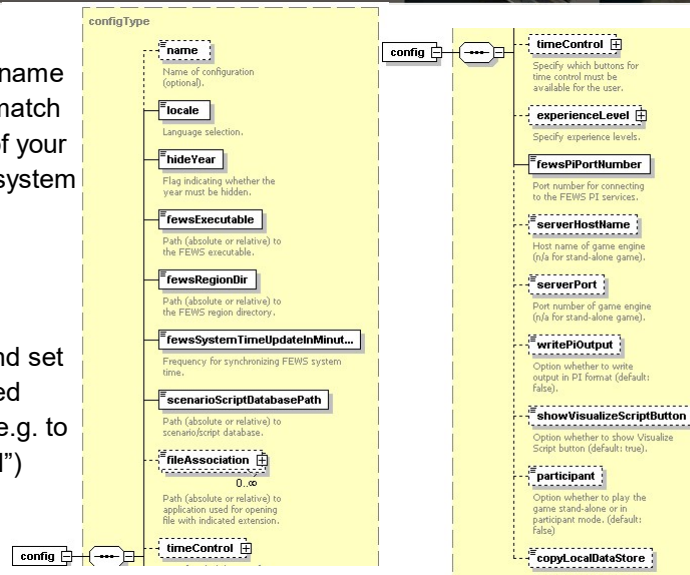
also take a look at the example application_config.xml on there

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application_config.xml

You can rename this file to match the name of your forecasting system

Inspect the example and set the preferred language (e.g. to “NL” or “EN”)



Design Scenario and Script

What do you need to edit a scenario to reach the learning objectives?

- Fill FEWS localDataStore

What do you need to create a script to reach the learning objectives?

- Interactive script
 - Choices (made by player)
 - Conditions (pre-defined in script)
- Format forecast table
- Feedback
- Dictionary

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Making a script interactive

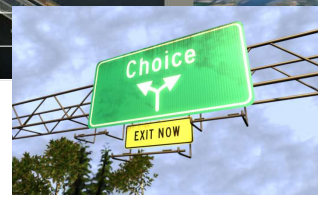
The timeline includes the following key events:

- 1999:** Apple registers iPhone.org and makes it redirect to Apple.com.
- Oct 19 2002:** iPhone TM Apple files for iPhone Trademark in Singapore.
- Oct 17 2002:** iPhone TM Apple files for iPhone Trademark in UK.
- Oct 2 2002:** iPhone TM Apple registers iPhone Trademark in Australia.
- Oct 13 2004:** iPhone TM Apple files for iPhone Trademark in Canada.
- Oct 11 2004:** iPhone TM Apple files for iPhone Trademark in Canada.
- Dec 16 2004:** Apple and Motorola admit they work on a phone that will use a mobile version of iTunes.
- Oct 22 2005:** Steve Jobs: "There are more phones out there than you can count."
- Oct 12 2005:** Patent is granted for Apple iPhone.
- Sept 16 2005:** iPhone TM Apple files for iPhone Trademark in New Zealand.
- Nov 10 2005:** Patent is granted for Apple iPhone.
- Jan 10 2007:** Cisco sues Apple over use of iPhone trademark.
- Jan 22 2007:** The D Day? iPhone finally launched.
- July 03 2007:** Since there is no CDMA Apple publishes Web Development Page for the iPhone.
- Sept 15 2007:** iPhone confirmed for 14 Mobile Germany, also on Nov 9.
- Oct 31 2007:** iPhone is named invention of the year by Time Magazine.
- Mar 05 2008:** Apple releases The SDK for the iPhone.
- July 1 2008:** iPhone 3G hits the streets. Starting in 22 countries it will be available in 70 countries at the end of 2008.

Other events include: Apple & Motorola's joint venture; iTunes enabled phone named ROKR is released; Steve calls it "an iPod Shuffles on wheels"; iPhone TM Ocean Telecom Services (though to act in the name of Apple files for iPhone Trademark in the US); Official Steve jobs announced at MacWorld that they will release the iPhone; Engadget publishes an unconfirmed rumor that iPhone will be delayed; The news makes Apple stock drop almost 3% (that's around \$4 billion); iPhone comes to UK via O2; iPhone will be available on Nov 9 2007; Apple releases a 16 GB iPhone; Orange will bring the iPhone to France starting Nov 29 2007; iPod Touch is released. Also there is a \$200 price cut for the iPhone. The 4GB model is discontinued; Apple and Cisco settle their dispute, deciding to share the iPhone name.

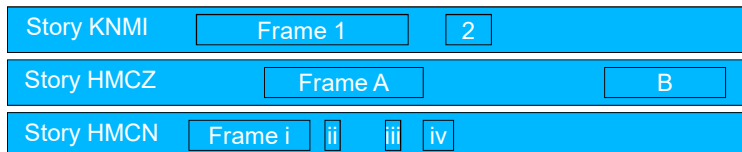
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Choices (made by player)



Present player with a choice. This has been geared towards the task of gathering data:

If the player calls the right person during the proper timeslot, the player gets additional information.



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Conditions (pre-defined in script)

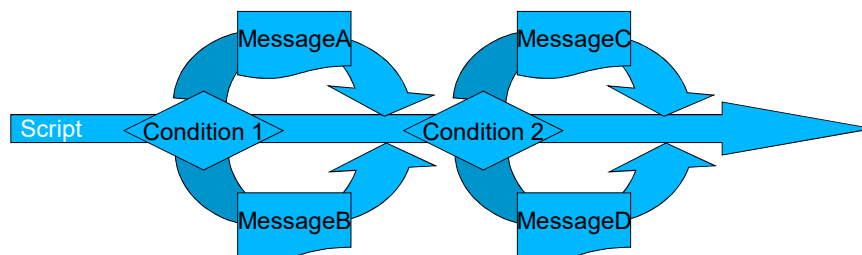
If <event> occurs then <message>

An <event> can be

- prediction above or below a certain value

Such an event can cause

- pop-up of a <message>
 - > Simple version of branching is pop-up of a single message (i.e. phone call, warning, ...)



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Forecast table

Fully configurable: number of columns and rows, headers, cells
editable columns, units, language.

sector	station	date	time astro HW	astro water level [cm]	SVSD forecast [cm]
Scheide	Vlissingen	March 12	17:16	237	
West-Holland	Hoek van Holland	March 12	18:01	122	

```
<forecastTable>
  <header>
    <column id="sector">sector</column>
    [...]
    <column id="astro_level" unit="cm">astro water level</column>
    <column id="svsd_forecast" unit="cm" isEditable="true">SVSD forecast</column>
  </header>
  <row id="Vlissingen">
    <cell columnId="sector">Scheide</cell>
    [...]
    <cell columnId="astro_level">237</cell>
  </row>
</forecastTable>
```

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Feedback

Learning will be based on feedback, not on a scoring system

Base feedback on

- comparison of player's forecast to
 - > actual forecast
 - > forecasts from previously or simultaneously played games
- choices made and conditions that were triggered
 - > all actions of the player within Water Coach are logged

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Let's get to work - ScenarioScriptDatabase

Create a LocalDataStore

For starters you can use the LocalDataStore of the OC

We will get back to this later on

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Let's get to work - script_config.xml

The script file should be named *script_config.xml*

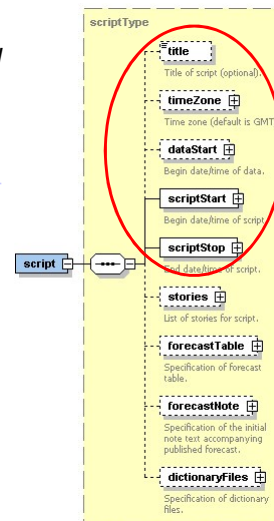
Create your script

<http://publicwiki.deltares.nl/display/EAT/Script+configuration>

shows an example file

The tools provided can be used in any way you like, get creative!

The exercises will walk through different options of a script, using an example script (see wiki).



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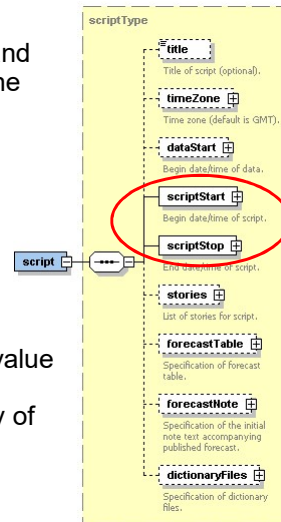
script_config - Example

Run the Water Coach (ConfigCourse_WC.exe) and choose the scenario named "demo". Follow the on-screen instructions.

What is the difference between <dataStart> and <scriptStart>? How can you use this?

For how long does the example script run?
Change the length of the script by changing the value of the <ScriptStop> keyword (in the file "script_config.xml" in the appropriate directory of the scenario database).

Test it!

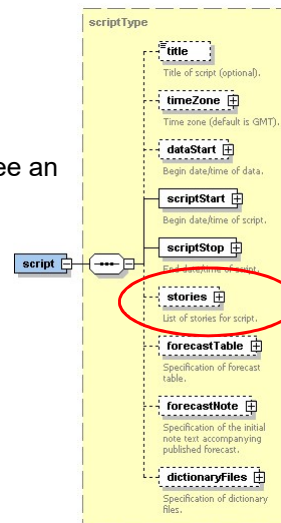


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script_config - Stories

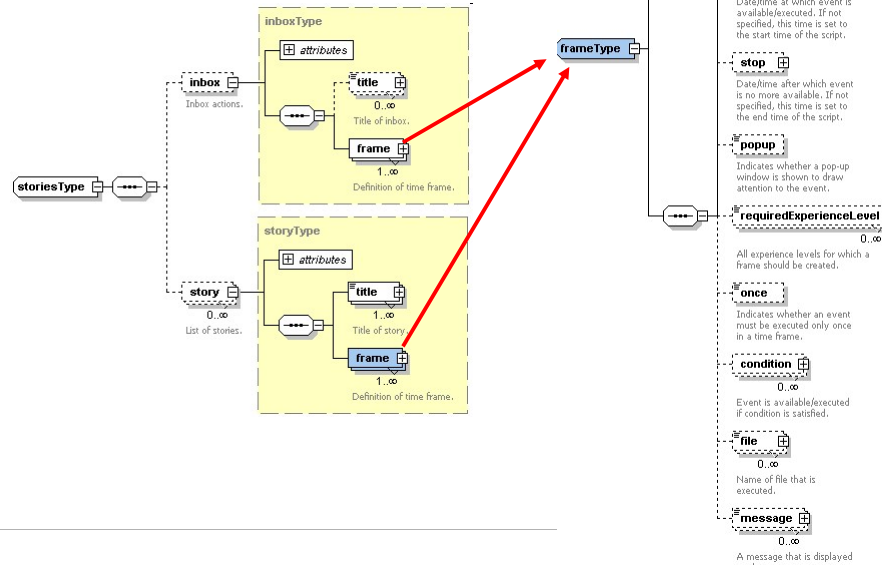
So-called stories can be used to add dynamical content to the script.

Press the "Story" button in the Water Coach to see an example.



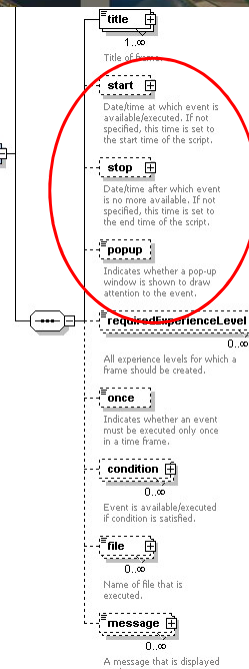
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script_config - Stories, frames



Frame - Start, stop, pop-up

- Start and stop keys indicate the time window in which the frame of a story is active. (Inbox vs other stories)
- Start/stop format: YYYY-MM-DD and hh:mm:ss. Both keys are optional (default to the start and end time of the script).
- Popup key indicates whether or not to show a pop-up window at the start of the frame. (Inbox vs other stories)
-
- Add a second story to the script that contains at least three time frames. Make the first frame active for the first 30 seconds of the script, the second frame active for the next 30 seconds, and so on.
- Experiment with these keywords in a story.



Frame - Experience level

The requiredExperienceLevel key specifies that an event is only executed for the indicated level.

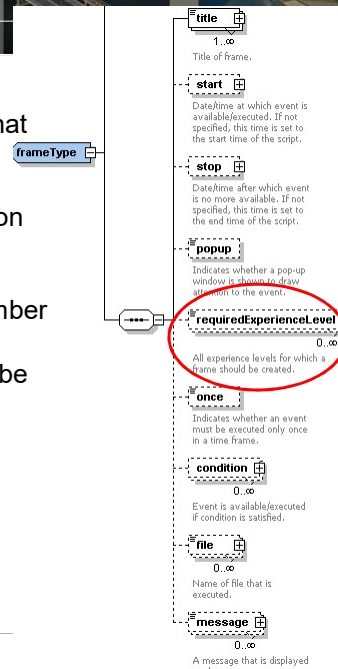
Experience levels are defined in the application configuration as a list, e.g. "Beginner; Intermediate; Expert".

In a frame one refers to these levels by a number (starting with 0 for Beginner).

If this key is not specified, then the event will be executed for all experience levels.

Experiment a little with experience levels.

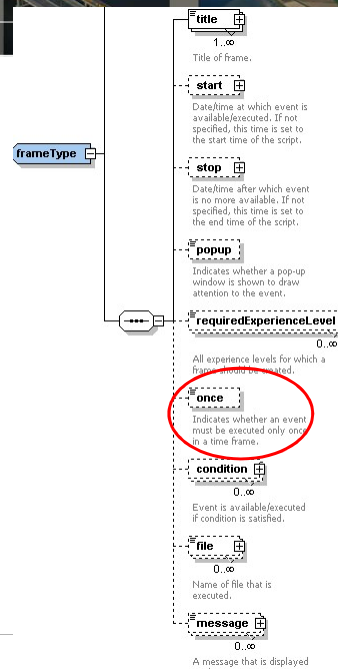
Do you want to make changes to your script_config.xml?



Frame - Once (phone calls)

The once key is a flag indicating that an event must be executed only once during a time frame.

This means that if the story button is activated a second time, the message will not be shown again, similar to a phone call that happens only once.



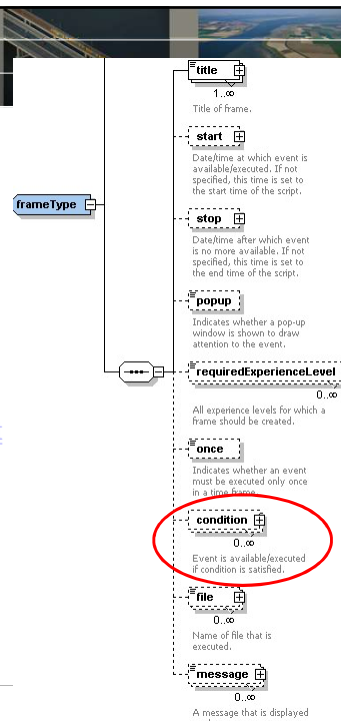
Frame - Conditions

Another way of making a script dynamical is provided by conditional frames.

For each frame (either in the inbox or in a story), a condition can be specified based on the forecast made by the user.

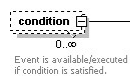
Examples can be found on the wiki at:

<http://publicwiki.deltares.nl/display/EAT/Script+configuration>



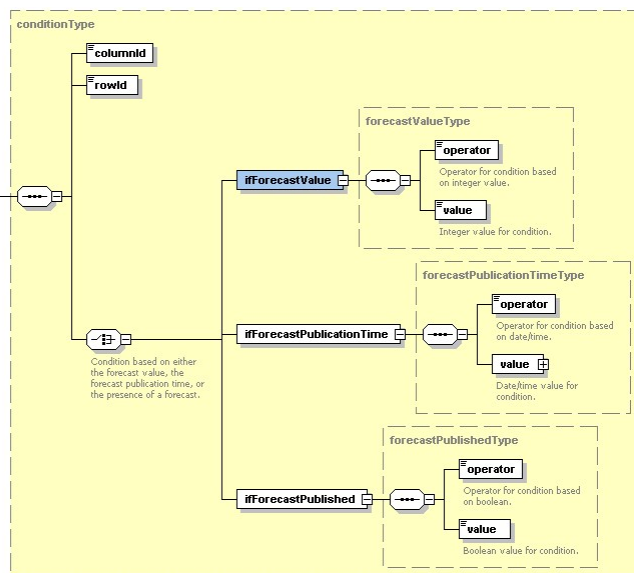
Frame - Conditions

Add a condition to a frame



You may also duplicate the frame and use disjunct conditions for the two frames.

Test it!



Frame - Files

You can refer to files in the scenarioScriptDatabase.

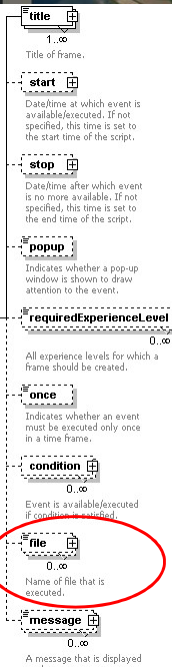
Download an image (e.g. in jpg format) from the internet that you want to show at the beginning of the script (sort of a splash screen).

Add the image to the scenario database directory and add a frame to the inbox that displays this image at the start of the script.

Create a file (e.g. pdf or txt) with a meteo forecast and also add it to a story.

Test it!

frameType



Frame - Message

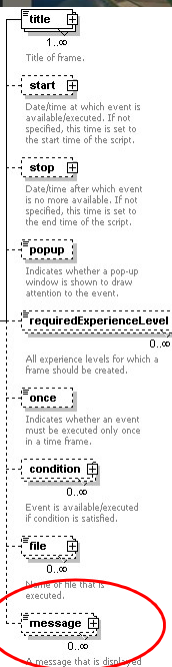
You can also create (short) message directly in the script using the message format.

You don't refer to a file, but enter the message text directly into the script_config.xml

Add a <Message> event for one time frame.

Test it!

frameType



script_config - Forecast table

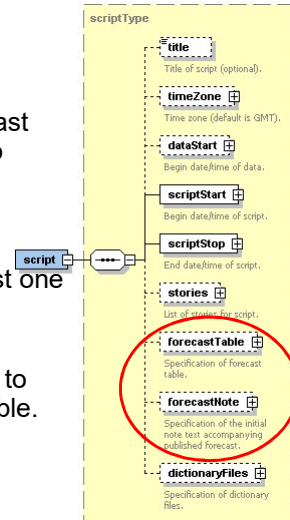
The goal of the script is to make a forecast.

Press the “Forecast” button to bring up the forecast table. The content of the forecast table is also configured in the file “script_config.xml”.

Add at least one non-editable and one editable column to the forecast table. Also, add at least one row to the table.

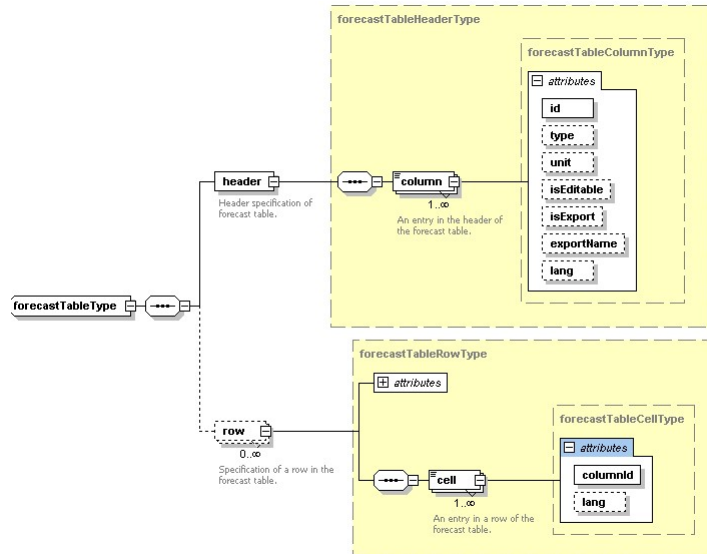
Use your creativity for suitable content. Feel free to change the existing content of the forecast table.

Test it!



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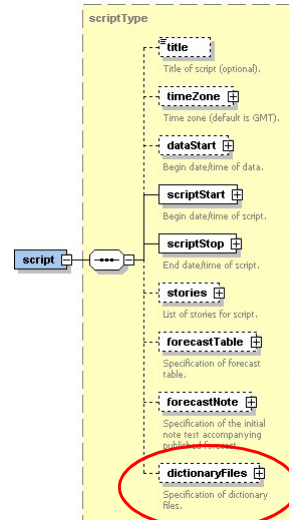
script_config - Forecast table



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script_config - Dictionary

Reference to dictionary file(s)



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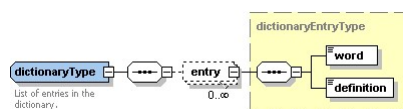
dictionary.xml - Entries

The actual dictionary file(s), i.e. a separate xml file

Create your own dictionary.

These dictionaries can also be used as a list of hints for the not so experienced player (experience level 0).

Every time a player looks up a word or definition, this is logged. Therefore, this can be part of the after action evaluation and feedback.



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script_config - Visualisation



By now we have created a filled script. To get a visual overview of the activity in the script, you can use the [showVisualizeScriptButton](#) option.

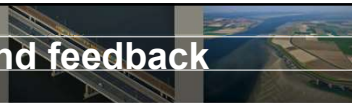
Make sure you have this button configured in your application_config.xml file and visualize your script.

Do you like what you see?

By keeping the start screen of the Water Coach open, you can quickly visualize changes made to the script by reopening the visualization.

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Connecting the dots - Hints and feedback



So far, alterations to the script have been made without referring to the scenario, i.e. the contents of the FEWS local data store. Start-up FEWS and inspect the data that is available.

Construct a simple script with events for a trainee in which he/she has to inspect the data in FEWS in order to be able to publish a forecast (for a location and parameter of your choice).

Prepare feedback at the end of the script based on the forecast of the trainee.

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