# **Event Browser Documentation**

Welcome! The event system is a core part of Old World, with 3500+ events that cover everything from gameplay tutorials to dynastic intrigue. The event system is designed to accommodate multiple authors working separately, with an assumption that they do not need to be closely coordinated.

The events are all stored in XML by the game and the browser is a UI tool for editing those XML files. There are two parts: 1) **The Event Browser** - the main screen when the browser is opened, useful for editing existing events. 2) **The Event Wizard** - a tool within the browser for guickly creating new events.

This guide will go through the different ways of setting up an event, best practices and things to keep an eye out for. Happy writing!



Figure 1. An event in-game.

# **Previewing Events**

## Open the EventBrowser

To open the Event Browser, navigate Old World's main menu: Tools>Event Browser

When you first open up the Event Browser, it will load all of the base game xmls and present you with the scene in Figure 2. If you are running the live version of the game, you will be presented with a popup prompt to create or select a mod whenever you try to make an edit. If you are running in Unity for development, you will be able to edit the base game files.

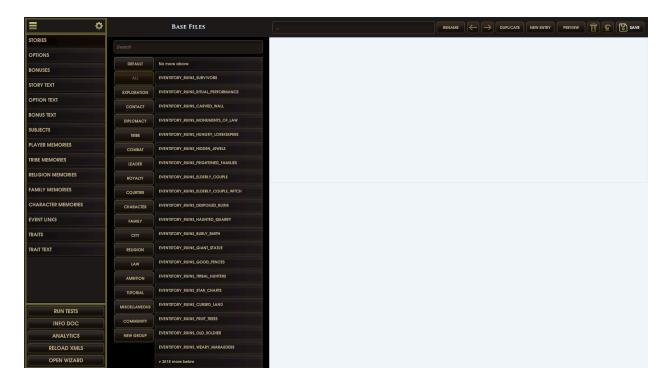


Figure 2. The Event Browser.

We will start by looking at EVENTSTORY\_RUINS\_RITUAL\_PERFORMANCE. Click the event in the list to select it and then click the *preview* button in the top right to show a preview of the event.

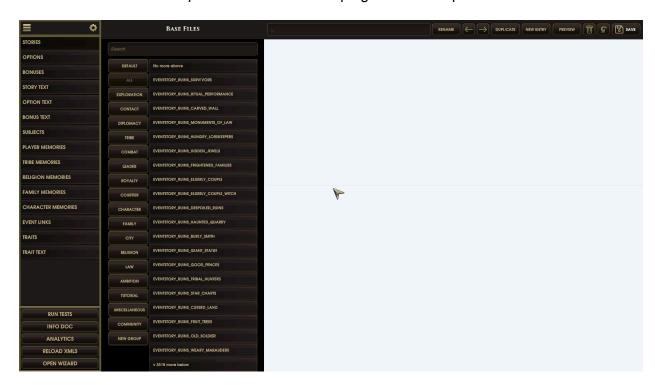


Figure 3. Previewing an event.



## The Anatomy of an Event

The event has a number of elements:

- 1. A title 'Ritual Performance'
- 2. A background image
- 3. A portrait of a character
- 4. The main body of text
- Options, which each have a 'bonus' (a gameplay effect) displayed when hovering

over

them.

Figure 4. Previewing EVENTSTORY\_RITUAL\_PERFORMANCE.

Closing the window and looking at the event in the browser, we can see the fields that set many of these elements already - such as English Name (the title), English Text (the main body text) and aeOptions (the options, which are other entries with their own text and bonus fields).

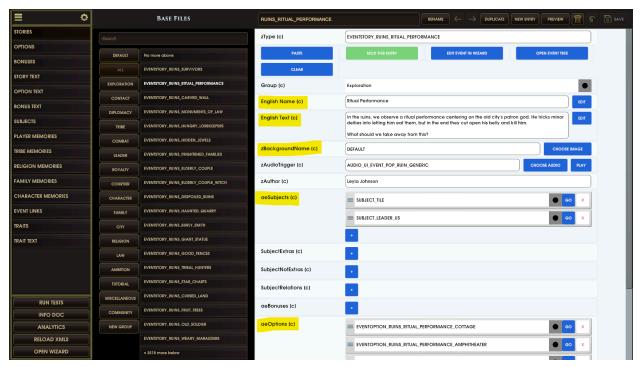


Figure 5. EVENTSTORY\_RITUAL\_PERFORMANCE in the browser.

In addition to this, there are fields for various other options, and meta-data such as the author of the event.

## **Creating Your First Event**

## Setting up a Mod

As mentioned before, if not working with the base Unity files, you will need to create a mod to edit the events.

- Press the gear icon in the upper left corner of the UI, this will open the "Mod Options" popup.
- Press the "Create New Mod" button in the popup.
- Enter the name of your mod. For example, we'll create the mod "Ruins Test".
- Press "Confirm". This will automatically create a file in the game data directory with the basic information for your mod, and should open that in your native file explorer window. See *Documents/My Games/OldWorld/Mods/Ruins Test*

You can also use this popup to select a different existing mod to edit. When you select a mod, the browser will take a few seconds to reload the info xmls and then you will be able to edit your mod within the browser. You can only load one mod at a time in the browser for simplicity's sake, and the current mod name will be labeled in the top bar as indicated in Figure 6.

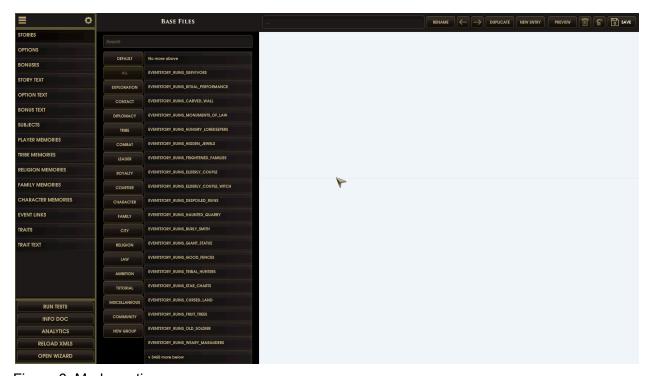
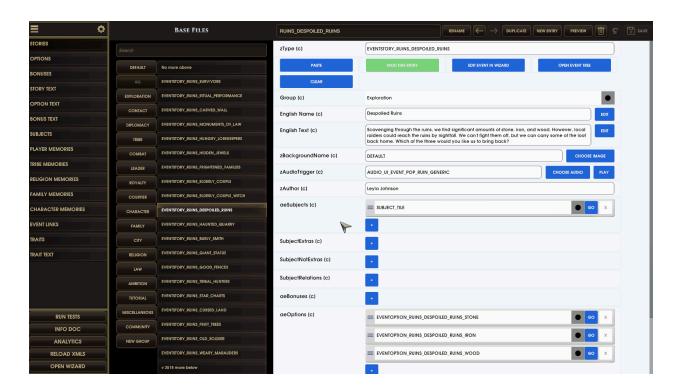


Figure 6. Mod creation.

## Making a Ruins Event

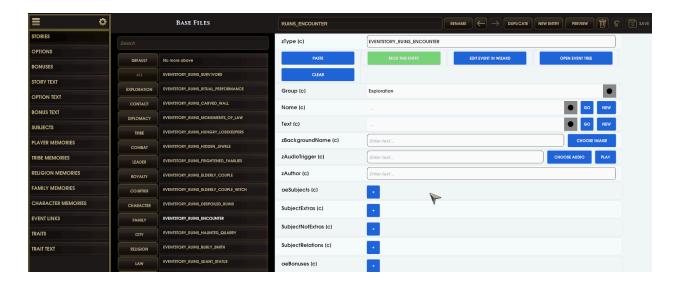
There are multiple ways to create and edit events in the Event Browser. We will first create an event from scratch in the Browser to introduce the various elements that go into an event, and then create it again in the Wizard, to show how it helps creating events. Start by pressing the "**New Entry**" button at the top of the screen. The popup will ask for a new **zType** - this is the unique identifier for the story in the XML. We will call

the new event EVENTSTORY\_RUINS\_ENCOUNTER. Clicking okay will create and select the new event, showing the empty fields to be created.



First let's add some text. The **Name** and **Text** fields hold the title and text respectively. You will see that at first there is no field to start writing the text into by default - this is because each text element is stored in its own XML to allow for localisation.

So first we need to create these elements. Click on the **New** button by **Name** field and the same popup as before will appear, asking for a name for the zType for the new text type being created. The naming convention is **TEXT\_[...]** for the main body text and **TEXT\_[...]\_TITLE** for the title, where [...] is the event's zType. Now we have somewhere to write!



You will see that the preview is grayed out - we need to save the event first. Click the **Save** button in the top right of the screen and, after you confirm the changes, the files will save. Along with a confirmation message, you will get an error message like the one below.



This is because there is some meta-data that the event needs to be valid.

The first error is simple to correct - the author of the event. Just add your name to the **zAuthor** field. A small thing to note is that the zAuthor field name has changed to italics. All field names will do this when they have been edited, to show what changes have been made since last saving.



The second unit test error shows that an event needs at least one option - we will return to those in a minute.

## Triggering an Event

But first let's look at what goes into getting an event to fire. The last error in the message says that **iRepeatTurns** cannot be empty. This is one of the various fields that balances when an event appears in the game.

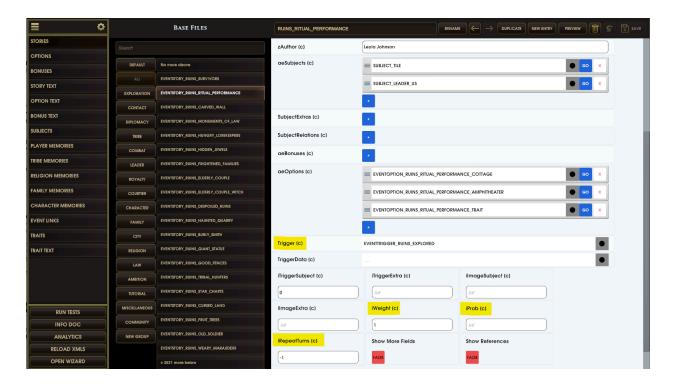
To give a quick rundown of the most commonly used:

**Trigger**: The gameplay action that will trigger this event such as exploring a ruin, finishing a mission, initiating combat with a unit or a character dying. Each trigger has its own percentage check for how often it will try to fire an event. If this field is left blank, then the event is not tied to any specific action and can be randomly picked at the start of a player's turn.

**iWeight**: The weighting of how likely an event is to be picked against other valid events from the same trigger. 0 will never fire, 1 is the standard weighting, 2 is double as likely to be picked as 1 etc. If left blank it will default to 0, so it is important to remember to set a number.

**iProb**: This value determines the percentage chance of the event being added to the pool of valid events when a trigger fires. If left blank then it sets to 100, so there is always a chance of it being picked.

**iRepeatTurns**: This says how often an event can repeat. A value of 0 means there is no limit, it could theoretically happen again the next turn, whereas a number means that the game will wait that number of turns before considering firing the event again. -1 means that the event can only occur once.



So for our new Ruins event, we will use the Trigger **EVENTTRIGGER\_RUINS\_EXPLORED**, a **iWeight** of 1 and an **iRepeatTurns** of -1. This means that the event will only fire when a unit explores a ruin on the map, it has an average chance of occurring and will only show once per game.

If you hover the mouse over one of the entries from the Trigger field drop-down, you will notice that it has a comment for Subject and Extra as below.



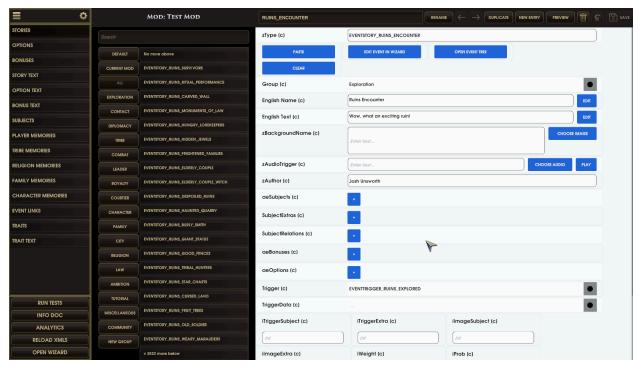
These correspond to the **Subjects** that the event will need to use. A Subject is one of the most important concepts in creating events - these are the game elements that the event needs to exist in the world for the event to fire.

## **Event Subjects**

Each event has a list of **Subjects**. These are used for testing the game state to make sure that the event makes sense in the current context, applying **Bonuses** (gameplay effects) and for allowing the text to change depending on the current game.

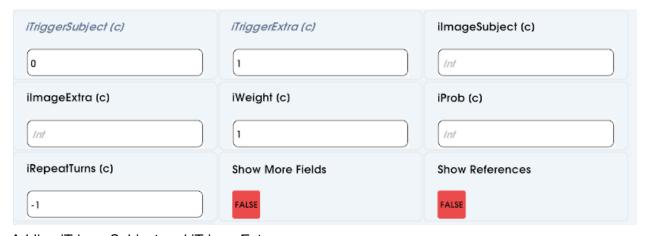
From **EVENTTRIGGER\_RUINS\_EXPLORED** we can see that the event will need a tile subject, and takes an optional unit subject so start by adding a **SUBJECT\_TILE** and **SUBJECT\_UNIT\_US**. Many subjects have the suffix of **\_US**, **\_THEM** or **\_US\_OR\_THEM**. These indicate whether the character, unit, city or other subject belongs to the player seeing the event, to a rival player, or to either.

Finally add a **SUBJECT\_LEADER\_US**. This is one of the most commonly used subjects as it represents the player's current leader character, who bonuses are often applied to.



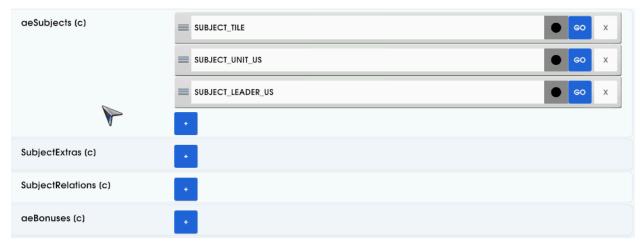
Adding subjects.

This means that the event will need a tile on the board, and the active player to have at least one unit and a leader character for the event to be valid. To make sure that when **EVENTRIGGER\_RUINS\_EXPLORED** fires, the event gets the relevant tile (where the ruins are) and the right unit (the one exploring the ruins), the subject index needs to be added in the **iTriggerSubject** and **iTriggerExtra** field. The index of the first subject is 0, so here 0 is the **SUBJECT\_TILE**, and 1 will be the **SUBJECT\_UNIT**.



Adding iTriggerSubject and iTriggerExtra.

If you want to apply additional checks on the Subjects, like only firing the event if the ruins are explored by a mounted unit, you can do so with the **SubjectExtras**. These take a number for the Subject index to check and the additional subject to test.

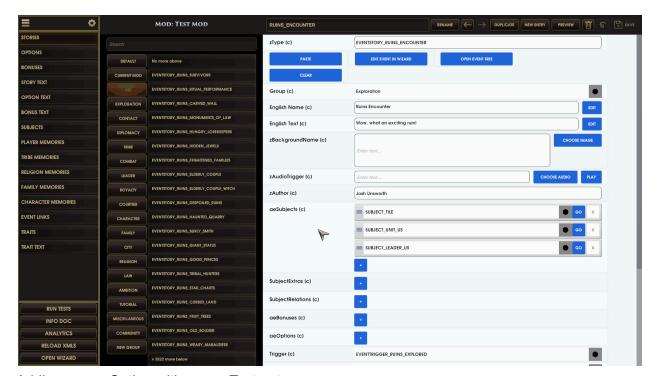


Adding a SubjectExtra to SUBJECT\_UNIT\_US.

## **Options and Bonuses**

Now we have subjects, we can add some options that will have an effect on these subjects. These are separate XML entries with their own zType and text entries.

The list on the far left of the browser lets us go between the different XML entry types, so to create a new option we select Options, select any entry from the list and then click New Entry, using the base tag as before.



Adding a new Option with a new Text entry.

To make this Option have an effect in the game we need to add a **Bonus**. Each bonus is applied to one of the subjects in the event, and the bonus order on the Option needs to be the same as the Subject order on the Event.

So to make the event give the player some food, we add three entries. The first two can be left blank as we don't want to apply a Bonus to the tile or to the unit, then in the third we will add BONUS\_FOOD\_GAIN\_SMALL, which will give the player a small amount of food.



The completed bonuses.

Finally we need to link the new Option to the event, so copy the zType into the aeOptions of the event, or save and pick your new option form the list



### Flavor

We now have a completed and working event, but there is more that can be done to make it more interesting.

**zBackgroundName** and **zAudioTrigger** let you choose an image and audio for the event. They each have a **Choose Image/Audio** button next to the field that lets you browse through the available options.

The portrait can also be set to show a certain character by specifying the Subject index in **ilmageSubject**, and **ilmageExtra** if a second portrait is wanted.

Now that the event has some subjects, we can also make the text a bit more interesting. Text can include variables that dynamically update to the context of the event/game. For example:

Great {TITLE-2}, your {UNIT-1,2} have come across an abandoned ruin. Weary, they take a moment to rest and toast your name, {CHARACTER-2}.

#### Could generate:

Great **Queen**, your **Chariots** have come across an abandoned ruin. Weary, they take a moment to rest and make a toast to your name, **Queen Cleopatra the New**.

As you can see, variables are surrounded by curly braces {} and can have two parameters: the first is the variable name with the subject index. The second (like {UNIT-1,2}) is a modifier index for which form of the text you want (0 is default if you don't specify the form).

{UNIT-1} => Chariot {UNIT-1,1} => a Chariot {UNIT-1,2} => Chariots

Depending on the kind of variable you use, the form index is used differently. The list below contains the different types of variables you can use in events.

Variable	Example	Output
CHARACTER-X	{CHARACTER-0} speaks	King Ashurbanipal the Founder of Assyria speaks
CHARACTER-SHORT-X	{CHARACTER-SHORT-0} speaks	Ashurbanipal speaks
TITLE-X	"Greetings, great {TITLE-0}."	"Greetings, great Queen."
PLAYER-X	From {PLAYER-0} The {PLAYER-0,1} law He is {PLAYER-0,2} One of the {PLAYER-0,3}	From Assyria The Assyrian law He is an Assyrian One of the Assyrians
TRIBE-X	From {TRIBE-0} The {TRIBE-0,1} law He is {TRIBE-0,2} One of the {TRIBE-0,3}	From Gaul The Gallic law He is a Gaul One of the Gauls
RELIGION-X	A follower of {RELIGION-0}. The {RELIGION-0,1} book. She is {RELIGION-0,2}. One of the {RELIGION-0,3}.	A follower of <b>Zoroastrianism</b> . The <b>Zoroastrian</b> book. She is a <b>Zoroastrian</b> . One of the <b>Zoroastrians</b> .
FAMILY-X	The <b>{FAMILY-0}</b> family The <b>{FAMILY-0,1}</b> are angry. A <b>{FAMILY-0,2}</b> family member	The <b>Julia</b> family The <b>Juliae</b> are angry. A <b>Julian</b> family member
RELATIVE-X	Your {RELATIVE-0}	Your sister
CITY-X	The gates of {CITY-0}.	The gates of <b>Babylon</b> .
UNIT-X	The <b>{UNIT-0}</b> attacks.	The <b>Warrior</b> attacks.

	You call <b>{UNIT-0,1}</b> forwards. A unit of <b>{UNIT-0,2}</b> .	You call <b>a Warrior</b> forwards. A unit of <b>Warriors</b> .
LANDMARK-X	Close to the {LANDMARK-0}	Close to the Alps

One of the most common markup tags is the gender conditional which will take into account a character subject's gender when generating the text. In the example below, if CHARACTER-1 (i.e. character index 1 in your *aeSubjects* list) is male the text will render "He" and if the character is female the text will render "She".

{G1:He:She}

To learn more about Mohawk's text system, see this document.

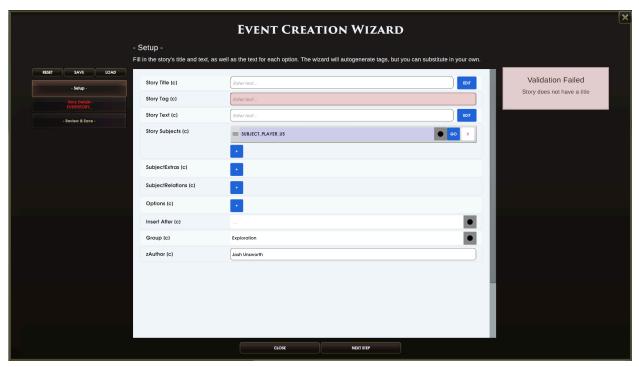


A completed event.

## Creating an Event in the Wizard

The **Event Wizard** is similar to the **Event Browser**, with the same fields and options. The main advantage is that new zType XML entries are automatically generated and connected as needed, taking out the time and manual labor of naming and connecting new text, option and bonus types.

To create a new event with the Wizard, click the **Open Wizard** button in the bottom left of the browser.



The Event Wizard.

The Wizard opens on the **Setup** screen, shown on the left at the top of a list of **Steps**. These will automatically be generated as we create options and bonuses.

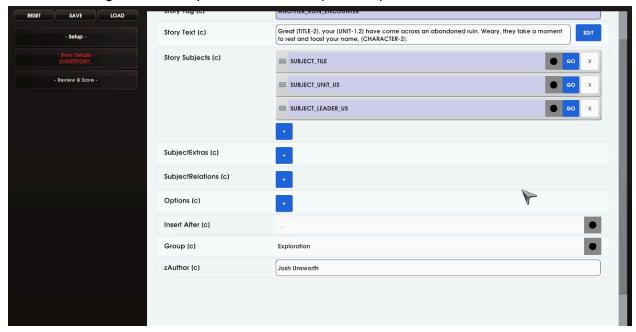
Typing a **Title** will automatically try to create a **Story Tag**, which will be used to name the generated **zTypes**. It is also possible to write a new Tag directly if needed.



This will be used throughout with the applicable prefixes, for example the event will be called EVENTSTORY\_ANOTHER\_RUIN\_ENCOUNTER and the main body text will be TEXT\_EVENTSTORY\_ANOTHER\_RUIN\_ENCOUNTER.

The Text, Subjects, SubjectExtras can now all be set up as before.

Options are where the Wizard really shines. Clicking on the + creates a new option and text field, allowing quick creation of options. The Tag will be used as the option Suffix and can be changed or left as the default. Note that adding these new options will add an option Step to the list on the left.



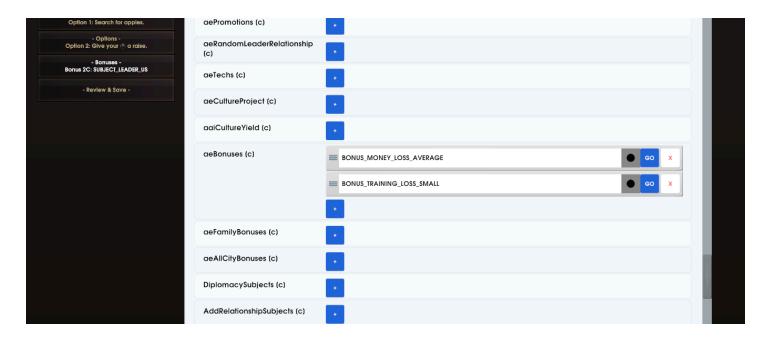
Adding options.

Click on **Next Step** at the bottom of the screen to progress to the next step, the **Story Details** page. This is where all of the other options from the Event Browser view can be found, such as the Trigger, iWeight, ilmageSubject etc.

After filling them out, **Next Step** takes us to the **Option 1** page. Here you will see that rather than having to add new fields for the Bonuses, they have been automatically added for the number of subjects, with a ? that tells you which Subject and SubjectExtra the bonus is being applied to when hovered over.

We can add the Bonus as before, by typing in an existing one, or there is a button to generate a new Bonus. Try generating a new bonus and look through the different options. One particularly useful feature is down at the end, the aeBonuses list. This allows you to add multiple bonuses to one subject.

As an example, I'm going to make the second option give the unit some XP with BONUS\_XP\_UNIT\_LARGE, but cost the leader some money and training by generating a new Bonus that applies BONUS\_MONEY\_LOSS\_AVERAGE and BONUS\_TRAINING\_LOSS\_SMALL.



Clicking through to the final step will automatically bring up a preview of the event and let you check to see how it has turned out. The **Next Step** button will become **Finish and Save**, click it to save your new event.



NOTE - The save button in the top left, shown below, will save your progress in the Wizard, it will not save the event to your files.



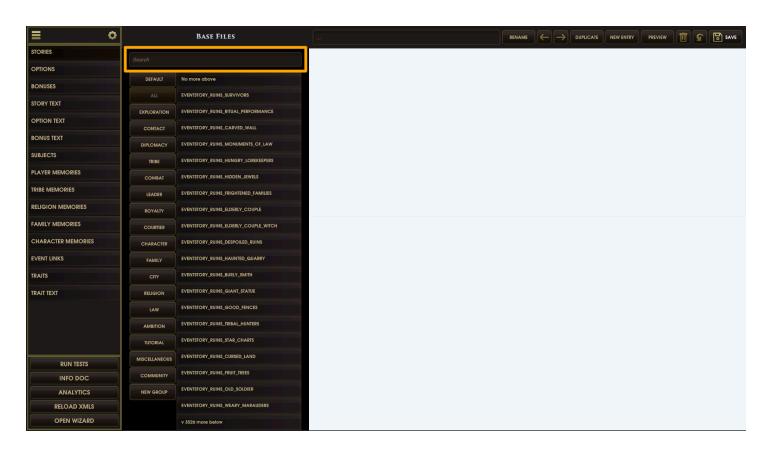
## **Further Topics**

## **Advanced Subjects**

Coming soon.

#### The Search Bar

The search bar is a tool for finding entries. By default it will find any zTypes that contain the search term. Spaces and capitals are dealt with behind the scenes, so 'RUINS\_ENCOUNTER' is the same as 'ruins encounter'.



It is possible to search for a specific field using ':', with the field name before and the search term following. Note that a field name needs to be exactly the same as it appears in the browser, including capitals, such as zAuthor, aeSubjects etc. (the exceptions are English Name and English Text, which can be searched with just Name and Text respectively). Leaving the search term blank after: will find results where the field is empty.

Trigger:new - will find events with a trigger that includes 'new', like EVENTTRIGGER\_NEW\_TURN.

Trigger: - will find any results that don't have an event trigger.

Multiple searches can be made at once by using ',' to separate searches. Any spaces around ':' and ',' are ignored, so they can be included or not.

To search a bool field, like bTutorial, 'bTutorial:' will find entries where it is false, 'bTutorial:1' will find entries where it is true.

To find an event with any value in a field, just use a single letter from the start tag of the zType. Eg. 'Trigger:e' will display all events with a trigger, as they all contain **EVENTTRIGGER**\_.

### **Event Links**

Coming soon.

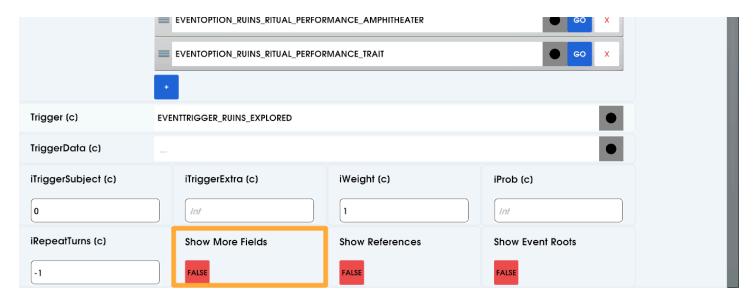
## Editing Events in the Wizard

Coming soon.

### The Advanced Text Editor

Coming soon.

### **Event Field Reference**



At the bottom of an event there is a special toggle to 'Show More Fields'. Clicking this will show more options for the event, which are listed below. The most commonly used fields are highlighted. Examples that use the field are in brackets.

zFrameType	Sets a special frame for the event, normally used for scenarios.
zVideoAsset	Plays a video file instead of the background image.
zEventURL	Adds a URL link that adds a badge to the event, normally to Wikipedia for

	historical events.	
zCommunityContribution	Can be used instead of zAuthor, shows a CC badge on the event that shows the name entered here when hovered over.	
zNotes	Adds notes to the event that can be seen hovering over the CC badge in Debug mode.	
SubjectRepeatTurns	The minimum turns before the event can happen for a specific subject1 means it will only happen once for that subject.	
SubjectNotExtras	Extra tests for the subject which must be false.	
SubjectAny	The event will be valid if at least one of the subject extras specified here are true for each subject.	
SubjectNotRelations	Tests that none of these relations are true.	
Class	Adds the event to an event class, which helps to regulate and separate similar events.	
ilmageSubject	Display a portrait for the character subject at this index.	
ilmageExtra	Display a second portrait, showing the character subject at this index.	
ilmageOther	Displays a portrait of the non-character subject at this index if possible.	
zHighlightAttribute	Highlights a UI element, used for tutorial events.	
iTagIndex	Adds an index to the attribute tag.	
iLookAtSubject	The camera will look at this subject when the event begins. Defaults to -1, which means it looks at the first valid subject.	
iMarryTempSubject	If using a subject with bSuitorTemp (like SUBJECT_SUITOR_TEMP), the subject at this index is the intended target for marriage. This ensures the generated characters have the right gender etc to be valid.	
iSortOrder	Sets the order in which events are shown if triggered at the same time, higher meaning earlier.	
EventLinkPrereq	Checks if the needed EventLink has been created. See <a href="here">here</a> for more on Event Links.	
iEventLinkTurns	Sets the minimum number of turns after the EventLink is created before this event becomes valid.	
LawPrereq	A law that the player must have active in order for this event to fire.	
CouncilInvalid	The event will only happen if the player does not have this position filled.	
MinOpponentLevel	The event will only fire if the game is set to this OpponentLevel or higher in the settings.	
MaxOpponentLevel	The event will only fire if the game is set to this OpponentLevel or lower in	

	the settings.
MinTribeLevel	The event will only fire if the game is set to this TribeLevel or higher in the settings.
MaxTribeLevel	The event will only fire if the game is set to this TribeLevel or lower in the settings.
MinDifficulty	The event will only fire if the game is set to this Difficulty or higher in the settings.
MaxDifficulty	The event will only fire if the game is set to this Difficulty or lower in the settings.
iMinLeader	The minimum leader needed for this event to be valid. For example, if set to 2 then the event will not trigger for your first leader.
iMinTurns	The minimum turn number required for this event to trigger.
iMaxTurns	The maximum turn number on which this event can trigger.
iPriority	The priority over other valid events. The default is 1. An event with a higher priority will always be picked over an event of a lower priority, no matter the iWeight and iProb.
bHidePrereqs	Hides the text that shows the event prerequisites.
bSinglePlayer	If true, the event will only occur in single player games.
bMultiplayer	If true, the event will only occur in multiplayer games.
bAllOptions	The event will only occur if all of the options are enabled.
blgnoreOptions	Ignore the unit tests to check that the event has at least one option.
bAlwaysTriggers	If true, the event ignores the probability check for the Trigger.
bForceChoice	If true then the event cannot be minimized or dismissed, but only closed through an event option.
bTutorial	If true, then only appears with the Show Tutorials option on.
bHidden	The event will not be shown to the player when triggered. Any bonuses on the main event will still be applied.
bMultiples	If true, this event will not stop others from firing. Useful in situations such as the Regency events, where the events should fire regardless of other Death events.
aiRatingWeight	Adjusts the weight based on the Leader's Ratings, like Courage etc.
aiMortalitySkipProb	Sets the chance that the event will be skipped based on the mortality level. Especially useful for making sure that death events are rare or skipped completely for MORTALITY_LONG.

aeLawInvalid	The event will be invalid if any of these laws are active.
aeEventStoryRepeatTurns	A list of events that iRepeatTurns checks against. This is especially useful for making sure that variations of an event do not fire close together.

#### Common Bonuses

Coming soon.

## Triggering events

By Solver

You can trigger your events in-game using console commands. There are two console commands to be used.

doeventstory EVENTSTORY\_NAME - attempts to immediately run the provided event. The event's preconditions have to be met then, e.g. if the event requires a friendly family then there has to be a friendly family currently in the game. This command works for most events with no triggers but will fail for some events that need extra data, for example events triggering when a tech is discovered or an improvement completed.

The command will also not work for events that require an event link - you have to make sure the event link is added first by triggering the prerequisite event.

eventstorymaxprio EVENTSTORY\_NAME - if doeventstory won't work because the event is too complicated, this command is a better option. It doesn't trigger the event immediately but it overrides the game's randomness so the event will be triggered the next time it can be.

For example, you want to test a culture event. You cannot use <code>doeventstory</code> because the command wouldn't know which city to apply to, and there are many such events, so using <code>eventstorymaxprio</code> is a good idea. Use this command and then trigger a culture level-up (through the game editor preferably) - the event you want will be triggered. If it doesn't trigger, there's a good chance something is wrong with the event.

## Troubleshooting events

By Solver

So you have an event that refuses to trigger even though the conditions seem right. Typical. If an event won't trigger, not even with eventstorymaxprio, chances are something is wrong with the event.

One good trick to use is the output from doeventstory. If the event could potentially work with that command (i.e. no complicated triggers) then the output you get can provide a clue. Here's example output when the command fails to trigger an event (it gets logged as an error in Unity):

```
Event Story: EVENTSTORY THROUGH THE SMOKE
Subjects Found :
50
null
Subjects Required:
0:SUBJECT PLAYER US
1:SUBJECT LEADER US
2:SUBJECT TRIBAL COURTIER
3:SUBJECT CAPITAL US
4:SUBJECT TRIBE PEACE OR TRUCE
5:SUBJECT LEADER TRIBE PEACE OR TRUCE
Subject Extras:
O:SUBJECT PLAYER MAX THREE COURTIERS
2:SUBJECT ADULT UNDER 30
4:SUBJECT TRIBE MAX NEAR
Subject Not Extras :
NONE
Subject Any :
NONE
Repeat Turns: 90
is EventStory Turn Valid : True
Law Pre: NONE
Trigger: NONE
```

The most relevant part is the list of subjects that were found:

```
Subjects Found:
0
50
null
```

These subjects correspond to the event's required subject. For the first two subjects, the game was able to find something (IDs 0 and 50), the third was one null. A null subject means it couldn't be found and caused the event not to trigger. In this example, looking at the Subjects Required list, you could deduce that SUBJECT\_TRIBAL\_COURTIER is the one not being found.

Whether you know which exact subject fails or no, it's useful to understand the two most common general causes why events won't trigger:

- A subject cannot be located. The game cannot find a subject that would fulfill the requirements
  (SubjectExtras, SubjectRelations, etc). In some cases this could be an incorrectly designed event that
  requires things that are technically possible but do not normally occur. For example, a teenager with an
  archetype. It's possible but doesn't normally occur because characters get an archetype when they
  become adults.
- One of the event options specifies a bonus that cannot apply to a subject. It could be something as simple as a trait, you cannot add a trait to a character who already has that trait. Often it's something a bit more complicated, for example a bonus instructs a character to become the general of some unit but the character is too old.

To distinguish between the two cases, a simple trick is to remove all bonuses from the event's options. Then you have options that effectively do nothing. If the event triggers now, the problem was probably with the option bonuses, otherwise it was with the subjects.