

LivCos

Source Code Paths

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1 Introduction

Some processes in the LivCos application are best explained with the source code involved.

2 Entity ID Management

The ID values of the entity elements are managed automatically. Whenever a new entity is inserted, it's ID value will be checked to be unique within the object.

```
<walk id="walk_2" cut-src="#walk_2" xmlns="livcos.org/ns/dev/code">
<title>
</title>
<call id="call_5" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/core/
ElementNode#method_23">
```

Set any value to an "id" attribute of a content element node (entity element).

```
<value id="value_3" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/core/
ElementNode#param_35">
<val>
</val>
</value>
<value id="value_9" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/core/
ElementNode#param_36">
<val>
</val>
</value>
</call>
<call id="call_6" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#method_55">
```

The set-attribute event is fired. The object, containing the entity, is registered to handle this event.

```
<call id="call_7" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#method_24">
```

First we collect the currently existing ID values with a certain prefix.

```
<value id="value_6" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#param_26">
<val>
</val>
</value>
<value id="value_10" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#param_30">
<val>
</val>
</value>
</call>
<call id="call_8" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#method_22">
```

If the value already forms the ID for another entity, we create a new one and replace the original setting.

```
<return>
</return>
<value id="value_1" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#param_21">
<val>
</val>
</value>
<value id="value_2" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/
ObjectDataNode#param_19">
<val>
</val>
</value>
</call>
<call id="call_10" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/core/
AttributeNode#method_6">
```

This again fires a set-attribute event.

```
<value id="value_8" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/core/AttributeNode#param_7">
<val>
</val>
</value>
<return/>
</call>
<call id="call_9" ref="/livcos.org/data/impl/livcos_0.7.1/org/livcos/cosmos/node/object/ObjectDataNode#method_55" base="/livcos.org/LivCos/data/project/Cosmos/design/CodePaths#call_6">
```

This time it is unique and we don't need to create and set another new value.

```
<return/>
</call>
<return/>
</call>
</walk>
```

3 Code Path TODOs

TODO: Allow to suppress return values, when it's not of any interest for the topic to explain.

TODO: Allow to name instances to be called.

TODO: Allow to document concurrent events.

TODO: Point a code walk to a specific source code revision.