

## Retrascope - Bug #7097

### 32-bit constants should be casted to appropriate values

04/21/2016 05:12 PM - Sergey Smolov

<b>Status:</b>	Closed	<b>Start date:</b>	04/21/2016
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Sergey Smolov	<b>% Done:</b>	100%
<b>Category:</b>	Engine (Parser)	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	0.2	<b>Published in build:</b>	1.0.1-beta-170912
<b>Detected in build:</b>	verilog.benchmarks		
<b>Platform:</b>			

#### Description

Use verilog.benchmarks auxiliary branch to reproduce this bug:

```
2016.04.21 17:10:40.724. INFO: Retrascope is starting
2016.04.21 17:10:40.728. INFO: Running: verilog-parser
```

```
2016.04.21 17:10:40.728. INFO: Options: {v=[/home/ssedai/projects/retrascope.git/build/resources/test/opencores/mips16/hazard_detection_unit.v], args=/home/ssedai/projects/retrascope.git/build/resources/test/opencores/mips16/hazard_detection_unit.v --target efsm}
```

```
Including file '/home/ssedai/projects/retrascope.git/build/resources/test/opencores/mips16/hazard_detection_unit.v'
```

```
2016.04.21 17:10:40.999. INFO: Storing: cfg
```

```
2016.04.21 17:10:40.999. INFO: Running: cfg-cgaa-transformer
```

```
2016.04.21 17:10:40.999. INFO: Options: {args=/home/ssedai/projects/retrascope.git/build/resources/test/opencores/mips16/hazard_detection_unit.v --target efsm, cfg=<cfg>}
```

```
2016.04.21 17:10:41.003. INFO: Storing: cgaa
```

```
2016.04.21 17:10:41.003. INFO: Running: cgaa-efsm-transformer
```

```
2016.04.21 17:10:41.003. INFO: Options: {cgaa=<cgaa>, args=/home/ssedai/projects/retrascope.git/build/resources/test/opencores/mips16/hazard_detection_unit.v --target efsm}
```

```
Exception in thread "main" java.lang.IllegalArgumentException: Errors in the expression description: [line 6 column 180: invalid function application, sort mismatch on argument at position 2, (declare-const wb_op_dest (_ BitVec 3))
```

```
(declare-const mem_op_dest (_ BitVec 3))
(declare-const decoding_op_src1 (_ BitVec 3))
(declare-const ex_op_dest (_ BitVec 3))
(declare-const decoding_op_src2 (_ BitVec 3))
(assert (and (and (or (= decoding_op_src1 ex_op_dest) (= decoding_op_src1 mem_op_dest) (= decoding_op_src1 wb_op_dest)) (not (= decoding_op_src1 #b0000000000000000000000000000000))) (and (or (= decoding_op_src2 ex_op_dest) (= decoding_op_src2 mem_op_dest) (= decoding_op_src2 wb_op_dest)) (not (= decoding_op_src2 #b0000000000000000000000000000000))))))
```

```
(check-sat)
(get-value ( wb_op_dest mem_op_dest decoding_op_src1 ex_op_dest decoding_op_src2))
(get-model)
(exit)
]
```

```
at ru.ispras.fortress.expression.ExprUtils.isSAT(ExprUtils.java:389)
at ru.ispras.fortress.expression.ExprUtils.areCompatible(ExprUtils.java:360)
at ru.ispras.retrascope.engine.cgaa.transformer.efsm.CgaaEfsmDataExtractor.checkInvCompliance(CgaaEfsmDataExtractor.java:231)
at ru.ispras.retrascope.engine.cgaa.transformer.efsm.CgaaEfsmDataExtractor.checkActionReachable(CgaaEfsmDataExtractor.java:217)
at ru.ispras.retrascope.engine.cgaa.transformer.efsm.CgaaEfsmDataExtractor.checkConditionsIfNot(CgaaEfsmDataExtractor.java:211)
```

```
at ru.ispras.retrascopengine.cgaa.transformer.efsm.CgaaEfsmDataExtractor.onBasicBlockBegin(C
gaaEfsmDataExtractor.java:200)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitBasicBlock(CfgWalker.java:361)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitNode(CfgWalker.java:186)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.visitChildren(CfgDfsWalker.java:72)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.processChildren(CfgDfsWalker.java:54)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.processStatement(CfgWalker.java:319)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitCase(CfgWalker.java:353)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitNode(CfgWalker.java:189)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.visitChildren(CfgDfsWalker.java:72)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.processChildren(CfgDfsWalker.java:54)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.processStatement(CfgWalker.java:319)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitSwitch(CfgWalker.java:343)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitNode(CfgWalker.java:192)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.visitChildren(CfgDfsWalker.java:72)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.processChildren(CfgDfsWalker.java:54)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.processStatement(CfgWalker.java:319)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitCase(CfgWalker.java:353)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitNode(CfgWalker.java:189)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.visitChildren(CfgDfsWalker.java:72)
at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.processChildren(CfgDfsWalker.java:54)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.processStatement(CfgWalker.java:319)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitSwitch(CfgWalker.java:343)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitNode(CfgWalker.java:192)
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at ru.ispras.retrascopemodel.cfg.walker.CfgDfsWalker.processChildren(CfgDfsWalker.java:54)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.processStatement(CfgWalker.java:319)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitProcess(CfgWalker.java:305)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitModule(CfgWalker.java:279)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.visitCfgModel(CfgWalker.java:255)
at ru.ispras.retrascopemodel.cfg.walker.CfgWalker.start(CfgWalker.java:156)
at ru.ispras.retrascopengine.cfg.CfgEngine.start(CfgEngine.java:87)
at ru.ispras.retrascopbasis.Engine.start(Engine.java:214)
at ru.ispras.retrascopbasis.ToolChain.start(ToolChain.java:112)
at ru.ispras.retrascopbasis.Engine.start(Engine.java:214)
at ru.ispras.retrascopRetrascope$ToolRun.start(Retrascop.java:207)
at ru.ispras.retrascopRetrascope.main(Retrascop.java:414)
at ru.ispras.retrascopRetrascope.main(Retrascop.java:367)
```

## History

### #1 - 04/21/2016 05:12 PM - Sergey Smolov

- Subject changed from 32-bit contatns should be casted to appropriate values to 32-bit constants should be casted to appropriate values

### #2 - 04/21/2016 05:12 PM - Sergey Smolov

- Subject changed from 32-bit constants should be casted to appropriate values to 32-bit constants should be casted to appropriate values

### #3 - 08/23/2016 04:22 PM - Sergey Smolov

- Status changed from New to Open

- Detected in build changed from svn to verilog.benchmarks

### #4 - 08/24/2016 01:48 PM - Sergey Smolov

Moved to Fortress: <http://forge.ispras.ru/issues/7527>

### #5 - 09/20/2016 04:48 PM - Sergey Smolov

- Status changed from Open to Resolved

- % Done changed from 0 to 100

Done in [421e4885](#).

### #6 - 09/20/2016 04:48 PM - Sergey Smolov

- Status changed from Resolved to Verified

**#7 - 11/30/2016 01:31 PM - Sergey Smolov**

Merged into master branch.

**#8 - 09/12/2017 03:29 PM - Sergey Smolov**

- *Status changed from Verified to Closed*

- *Published in build set to 1.0.1-beta-170912*