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10:12 PDT

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ID	Project	Category	View Status	Date Submitted	Last Update
0000976	X3D	19776-2 (ClassicVRML)	public	2016-08-30 07:58	2017-10-19 10:13

**Reporter** walroy

**Assigned To**

**Priority** normal      **Severity** minor      **Reproducibility** N/A

**Status** resolved      **Resolution** won't fix

**Summary** 0000976: Implicit fields in Classic VRML encoding

**Description** In X3D XML encoding, all predefined nodes have a default container field, so that most of the time you don't have to specify it: the X3D loader knows automatically what to do with child elements without containerField attribute. This also permits to have implicit arrays: multiple child elements with the same implicit containerField are gathered in an array.

I suggest to have a similar mechanism in Classic encoding, optionally replacing implicit unambiguous field names with a fixed symbol, e.g. "!" (unquoted), and making arrays where required. This would reduce some clutter.

E.g. the following snippet:

```
Transform {
  rotation 1 0 0 1.57
  children [
    Shape {
      geometry Box {
        size 3 0.5 3
      }
      appearance Appearance {
        material Material {
```

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```

        diffuseColor 1 0 0
    }
}
}
Shape {
    geometry Sphere {}
    appearance Appearance {
        texture ImageTexture {
            url "texture:checkerboard"
        }
    }
}
]
}

```

could be reduced to

```

Transform {
    rotation 1 0 0 1.58
    !Shape {
        !Box {
            size 3 0.5 3
        }
        !Appearance {
            !Material {
                diffuseColor 1 0 0
            }
        }
    }
    !Shape {
        !Sphere {}
        !Appearance {
            !ImageTexture {
                url "texture:checkerboard"
            }
        }
    }
}

```

**Additional Information** Submitted by Yves Piguet on the public list on 19th April 2016.  
[http://web3d.org/pipermail/x3d-public\\_web3d.org/2016-April/004720.html](http://web3d.org/pipermail/x3d-public_web3d.org/2016-April/004720.html)

**Tags** No tags attached.

**Attach Tags** (Separate by ",")

#### Attached Files

#### ☐ Relationships

## Users monitoring this issue

**User List** There are no users monitoring this issue.

Username

## Notes

~0001545

**walroy** (developer)

2016-08-30 08:00

A minor change to my proposal sent to this mailing list on April 19 entitled "implicit fields in x3dv": no need for "!" as a field name placeholder. The amended proposal is as follows:

For SFNode fields (explicit nodes optionally preceded by DEF, i.e. "nodeTypeId { nodeBody }" or "DEF nodeNameId nodeTypeId { nodeBody }"), the field name is optional if the field corresponds to the SFNode's containerField. For MFNode fields, the field name is also optional, and multiple nodes are collected as a single MFNode. The containerField of a PROTO is the containerField of the first node of its body.

Example:

```
Transform {
  rotation 1 0 0 1.58
  Shape {
    Box {
      size 3 0.5 3
    }
    Appearance {
      Material {
        diffuseColor 1 0 0
      }
    }
  }
  Shape {
    Sphere {}
    Appearance {
      ImageTexture {
        url "texture:checkerboard"
      }
    }
  }
}
```

is equivalent to

```
Transform {
  rotation 1 0 0 1.58
  children [
    Shape {
      geometry Box {
        size 3 0.5 3
      }
      appearance Appearance {
```

```

        material Material {
            diffuseColor 1 0 0
        }
    }
}
Shape {
    geometry Sphere {}
    appearance Appearance {
        texture ImageTexture {
            url "texture:checkerboard"
        }
    }
}
]
}

```

I've tested it in our experimental JavaScript X3D implementation, it looks fine, and more in sync with X3D XML. Feedback welcome...

Submitted by Yves Piguet 30th August 2016

[http://web3d.org/pipermail/x3d-public\\_web3d.org/2016-August/005140.html](http://web3d.org/pipermail/x3d-public_web3d.org/2016-August/005140.html)

~0001546

**walroy** (developer)

2016-08-30 08:04

Le 30 août 2016 à 16:30, doug sanden a écrit :

>> The containerField of a PROTO is the containerField of the first node of its body.

> You sure this will work for protos with multiple rootnodes?

Yes, I think so. Have you found a counterexample? Should there really be a problem, one could add an exception. Implicit field names would be a convenience, nothing more.

It shouldn't be different than the default containerField attribute in XML encoding, but I can't find where it's specified for prototypes.

Submitted by Yves Piguet 30th August 2016

[http://web3d.org/pipermail/x3d-public\\_web3d.org/2016-August/005141.html](http://web3d.org/pipermail/x3d-public_web3d.org/2016-August/005141.html)

~0002157

**brutzman** (developer)

2017-10-19 10:13

This approach is likely to be technically feasible in most cases, and provides excellent insight.

Nevertheless the benefits of terseness in VRML encodings is far outweighed by difficulties and problems associated with such a fundamental change in the grammar and in parser implementations. The editors do not want to pursue such a change.

## Issue History

Date Modified	Username	Field	Change
2016-08-30 07:58	<a href="#">walroy</a>	New Issue	
2016-08-30 08:00	<a href="#">walroy</a>	Note Added: 0001545	

## Issue History

Date Modified	Username	Field	Change
2016-08-30 08:04	<a href="#">walroy</a>	Note Added: 0001546	
2017-10-19 10:13	<a href="#">brutzman</a>	Status	new => resolved
2017-10-19 10:13	<a href="#">brutzman</a>	Resolution	open => won't fix
2017-10-19 10:13	<a href="#">brutzman</a>	Note Added: 0002157	

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