

# Feature Model Proposal

This proposal has been accepted and is the subject of the following active development:

- [Feature Model](#) (API including nice diagrams)
- [Feature Model Branch](#) implementation status of the fm branch

This proposal was completed in the [2.2.x](#) time frame, and is the subject of development in [2.3.x](#)

## Proposal

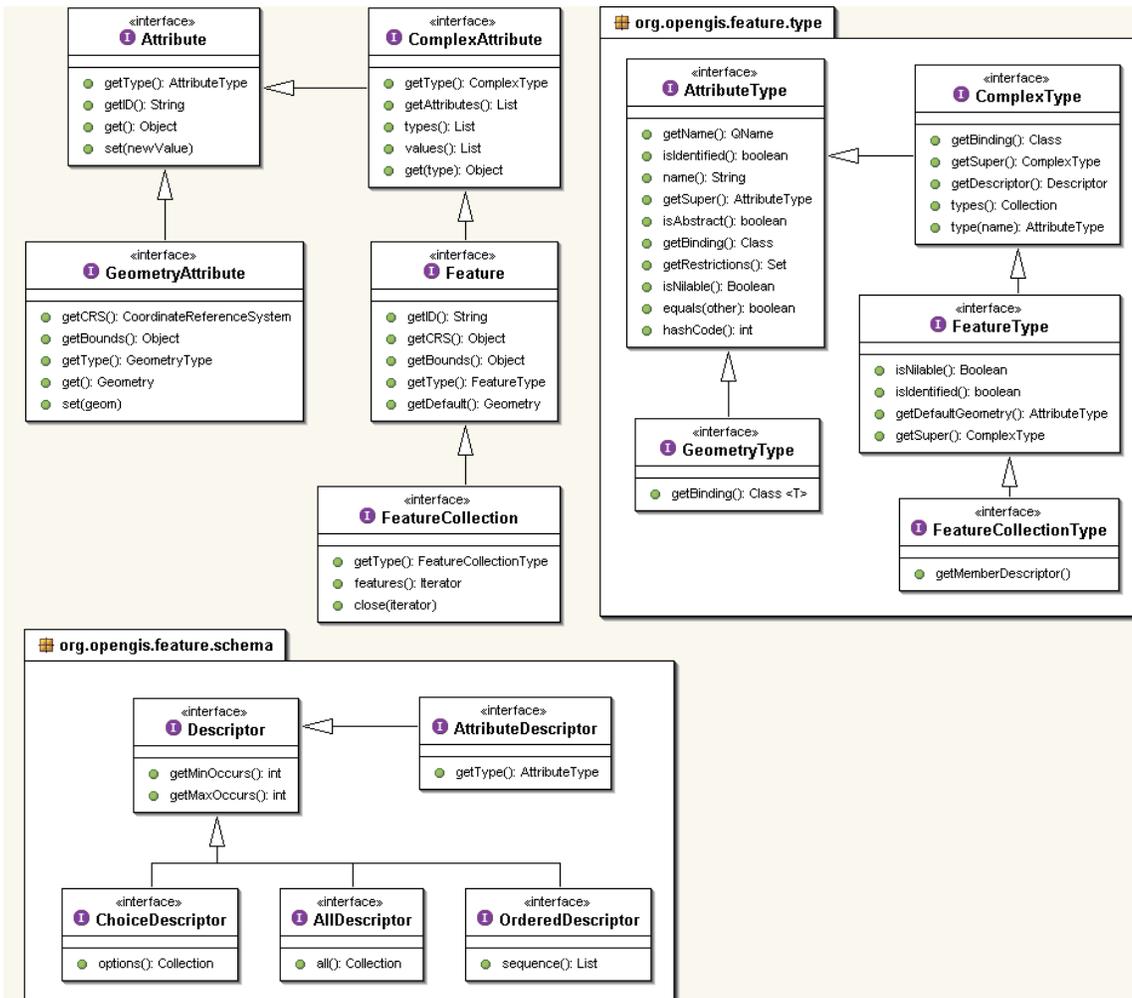
Based on the [Feature Model Discussion](#) we are having a bit of fun making the separation of schema from type.

Notes:

- javadocs are used when the needed to explicitly capture what is going on
- Java Bean conventions are used to access simple properties
- Collections conventions are used to traverse contained content, or for convenience methods.

This proposal is based on a split between Content, Type and Schema. The exciting part is - when you are working with "SimpleFeatures" you don't have look at any of the Descriptor information (it simply does not apply to your problem domain).

- [feature](#)
- [feature/type](#)
- [feature/schema](#)

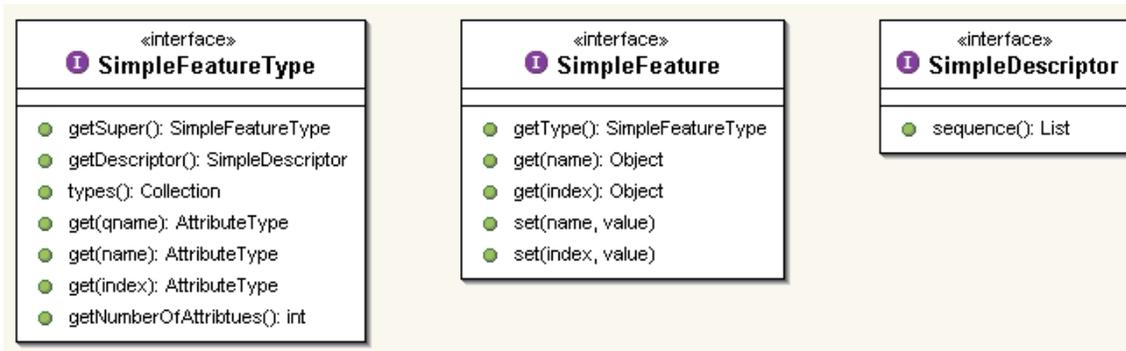


(Javadocs have not been generated at this time)

## Goal Simple API for Simple Content

- [feature/simple](#)

I would like to "reward" those with simple content with a simple API. If your data is a shapefile (or otherwise "Flat"), you should be able to ignore all Complex & Multiplicity issues.



The gold standard would be able to work from the Type description, ignore the middle layer and actually have the simple content view of life that XPath maintains:

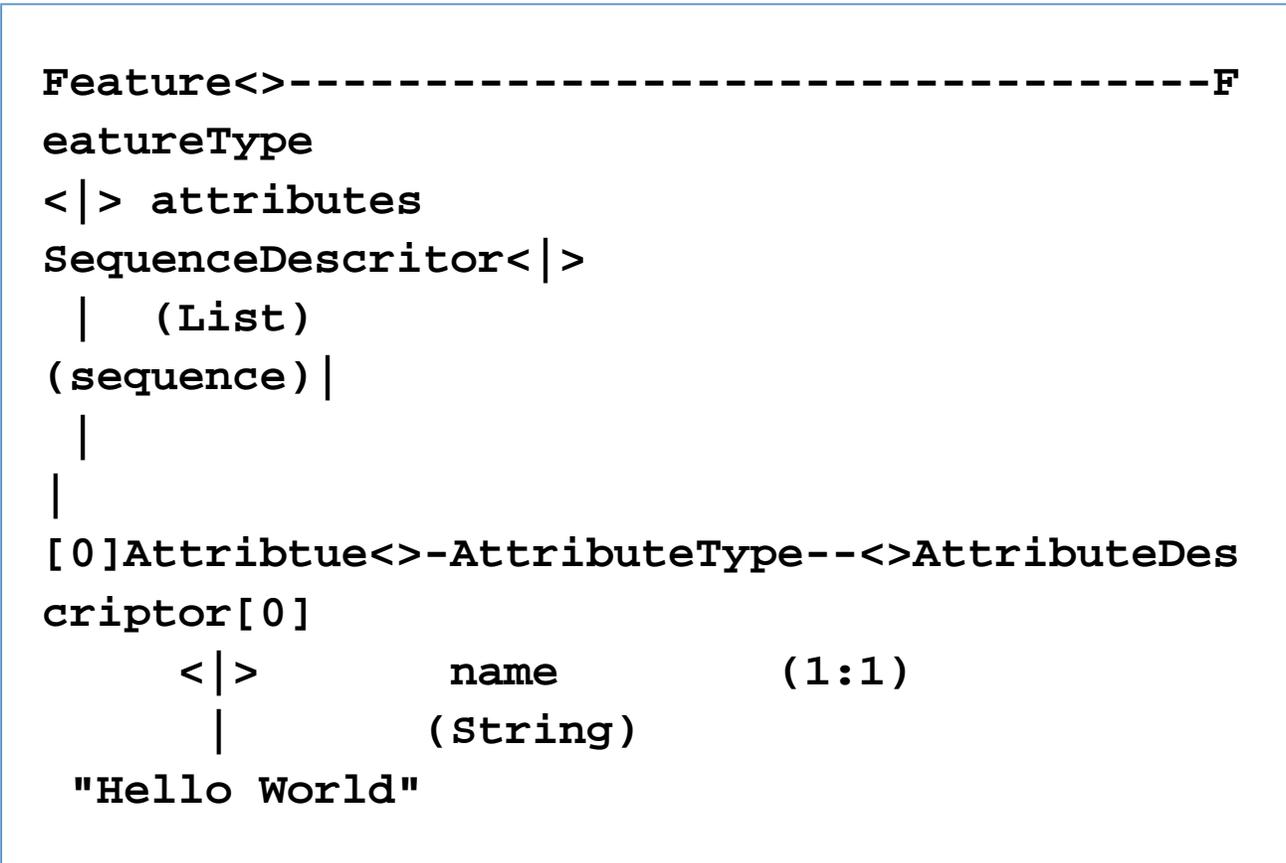
	Java	Simple
Content:	Object	Object, SimpleFeature
Type:	Class	AttributeType, SimpleFeatureType

This is pure extension and does not impact on the modeling "power" of the Feature Model.

### Complex Hello World

Consider the following information: [name="Hello World"]

When you consider the complete Schema, the picture would look like this.



### Simple Hello World

Given the 1 to 1 restriction for SimpleFeature we can just consider the following:

```

SimpleFeature<>----- SimpleFeatureType
<|>get("name")          <|> types
|                          | (List)
|                          |
"Hello World"           [0] AttributeType
                          name
                          (String)

```

## Schedule

There are four main projects that need to be kept in the loop for this proposal to be a success:

Projet	Contact	Involvement
<a href="#">GeoTools</a>	<a href="#">Gabriel Roldán</a>	
<a href="#">GeoServer</a>	<a href="#">Chris Holmes</a>	sponsor target (see <a href="#">ComplexDataStore project</a> )
<a href="#">User- friendly Desktop Internet GIS</a>	<a href="#">Jody Garnett</a>	(can start in Novemeber)
<a href="#">GeoAPI</a>		Need proposal for November OGC meeting

There are a couple other projects that are closely following this work, to see if the end result will be beneficial.

⚠ This schedule is a Negotiation - I will ask Project Leads to Review ⚠

Notes:

- Gabriel has fixed deadlines
- Intergration with UDIG cannot start until early Novemeber
- GeoTools PMC have writen a [Feature Model Letter of Support](#)
- GeoAPI has a hard deadline of an OGC meeting in November, work needs to be available mid October

Entries already denoted by:

**CD** (Complex DataStore) entieres are already in Gabriel's plan for GeoServer

**GA** (GeoAPI) Are needed for GeoAPI acceptance

**GT** (GeoTools) Are needed for GeoTools acceptance

**GS** (GeoServer) To be negotiated with GeoServers mailing list?

**UD** (UDIG) To be negotiated with UDIG mailing list?

Part of the reason we are able to ask the GeoTools/GeoServer/UDIG community to consider this proposal is for the oppertunity to harmonize with GeoAPI.

## **July 22nd - Completed**

### **1 CD** Alignment of complex sco branch with trunk

- Update previous GeoServer 1.2 work to GeoServer 1.3 trunk

## **August 30th, Completed**

### **2 GT** Feature Type mappings suite

- reports with real life examples of GML schemas and documents

## **September 9th, Completed**

### **3 GT** - FeatureType survey, description of current, limitations to be fixed, proposed aritecture

- [ProposedAttributeTypeAPI](#)
- The aritecture proposal is complete, we are struggling with a few design issues right as part of the next step

## **September 15th**

### **3 GT** FeatureType test suite - implementation of proposed architecture with JUNIT tests proving the approach

#### **3.1 GT** Interfaces extended from GeoAPI baseline marking changes as required (hard for a complete overhaul)

#### **3.2 GT** Implementation based on in memory data

#### **3.2 GT** implement tests proving the business driver examples are covered,

#### **3.3 GT** implement tests proving the XPath support for SLD documents are covered

(gs:--) GeoServer 1.3.0 released freeing up resources for GeoServer 1.4.x

## **October 1st**

### **4 GA** Intrgration with GeoAPI

#### **4.1 GA** move interface into geoapi pending

#### **4.2 GA** Write up of draft change request

#### **4.3 GT** branch of trunk for intergration

#### **4.5 GT** implementation of shapefile

#### **4.6 GT** implementation of postgis

#### **4.7 GT** ComplexDataStore, a datastore able to query from JDBC to complex (original 9-16th!)

## **October 15th**

### **5 GA** OGC Change Request

#### **5.1** Port of remainging datastores (only WFS should be hard)

## **November 1st**

### **6 GT** merge with gt trunk, milestone release to community

#### **6.1** GS start of geoserver changeover to milestone release/trunk

#### **6.2** UD udig 1.2.0 released as a stable target for development, frees up team for udig 1.3.x ...

#### **6.3** UD start of udig changeover to milestone release/trunk

#### **6.4 GT** GML Production enhancements, let geotools write out GML (original 9-29th!)

## **November 15th**

7 GA OGC Meeting, presentation to Working Group

7.1 GS ongoing geoserver changeover, this time with focus GML production

7.2 UD ongoing udig changeover, this time on random access?

### **December 1st**

8.1 GS initial release of geoserver 1.4.0-M0

8.2 UD initial release of udig 1.3.0-M0

### **Feb 1st**

9.1 UD target release for 1.3.0 w/ complex type support

9.2 GS target for release of 1.4.0 w/ complex type support