

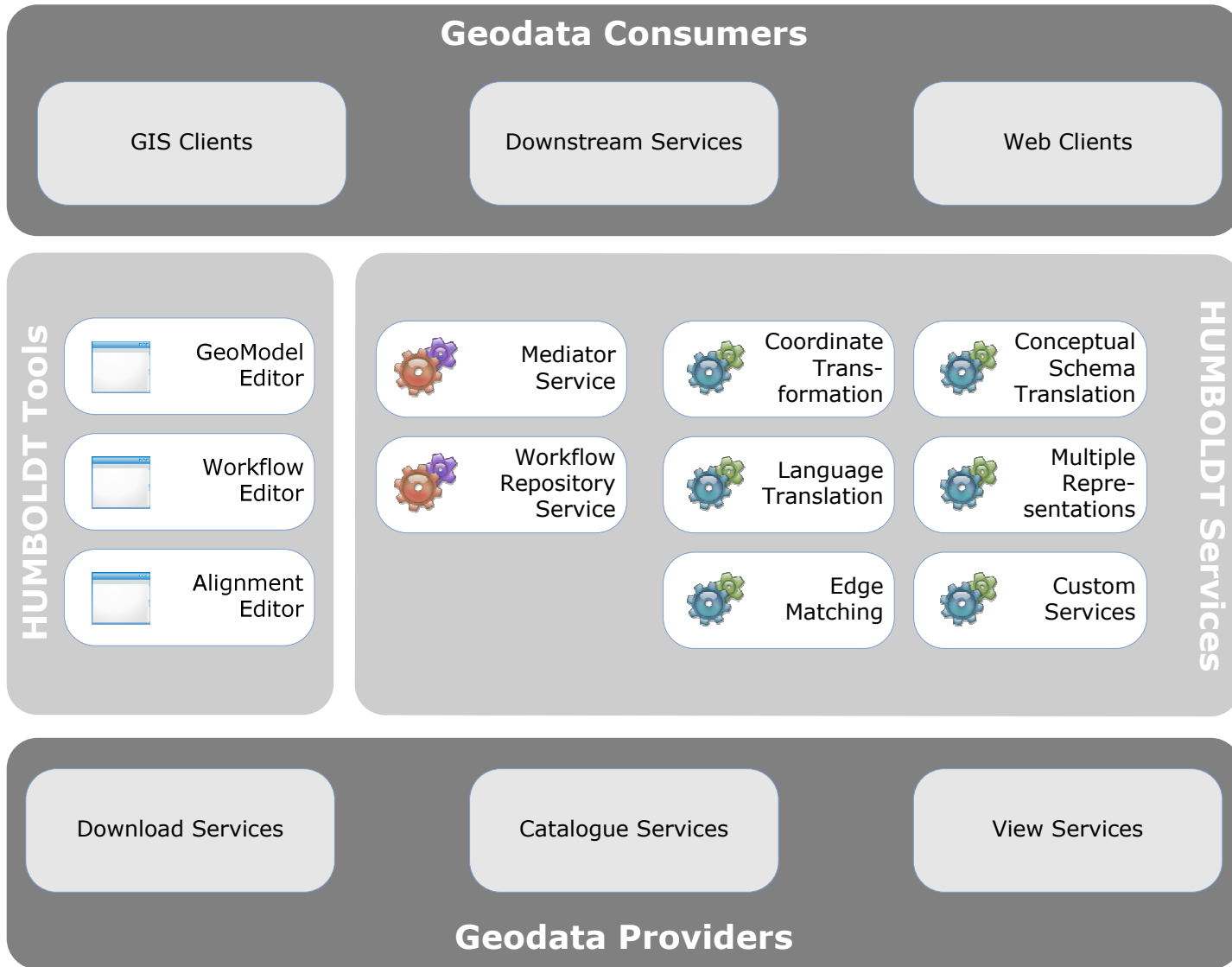


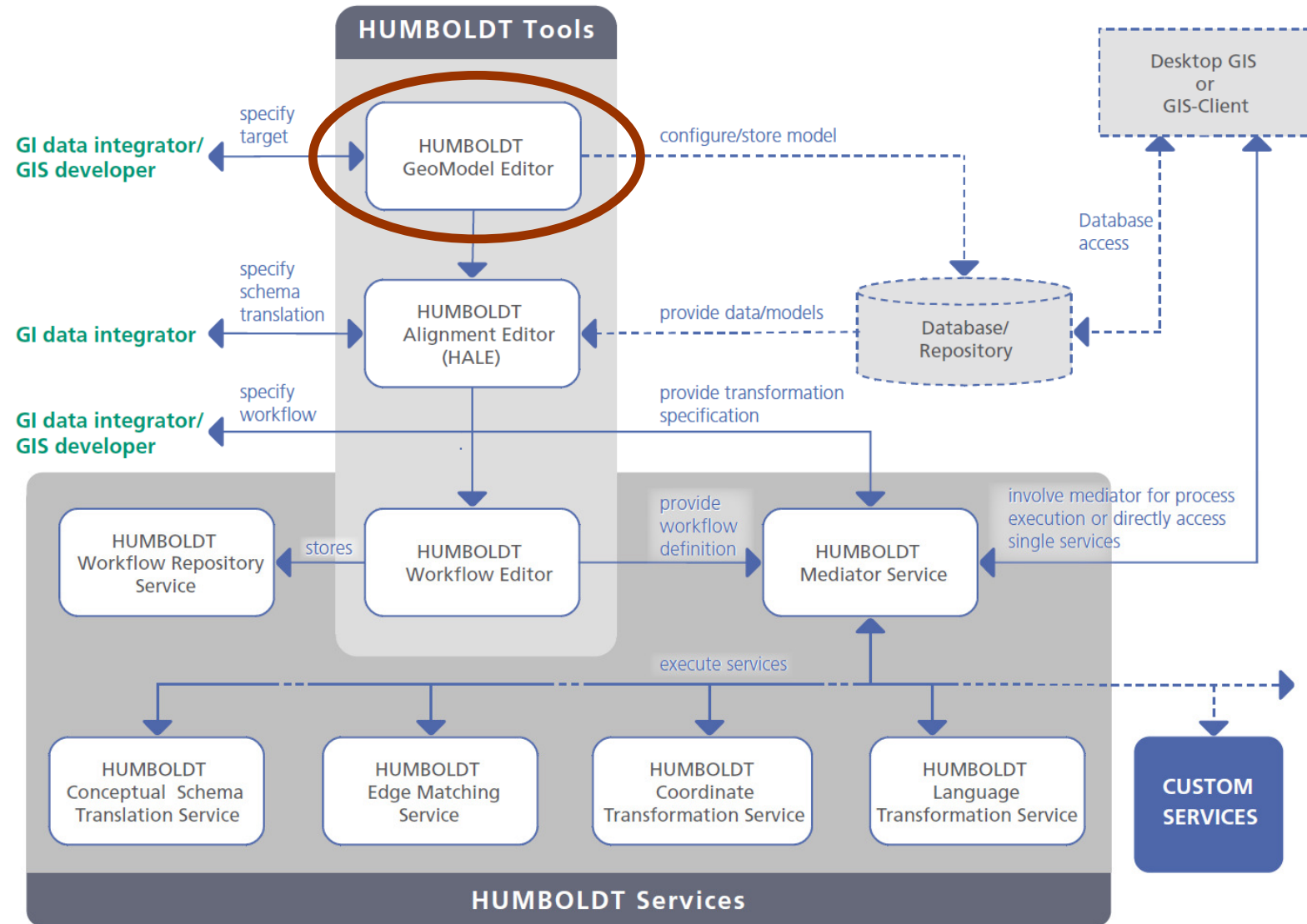
The HUMBOLDT Framework Components and their technical Validation

HUMBOLDT Open Day

Lisboa, September 28th, 2010

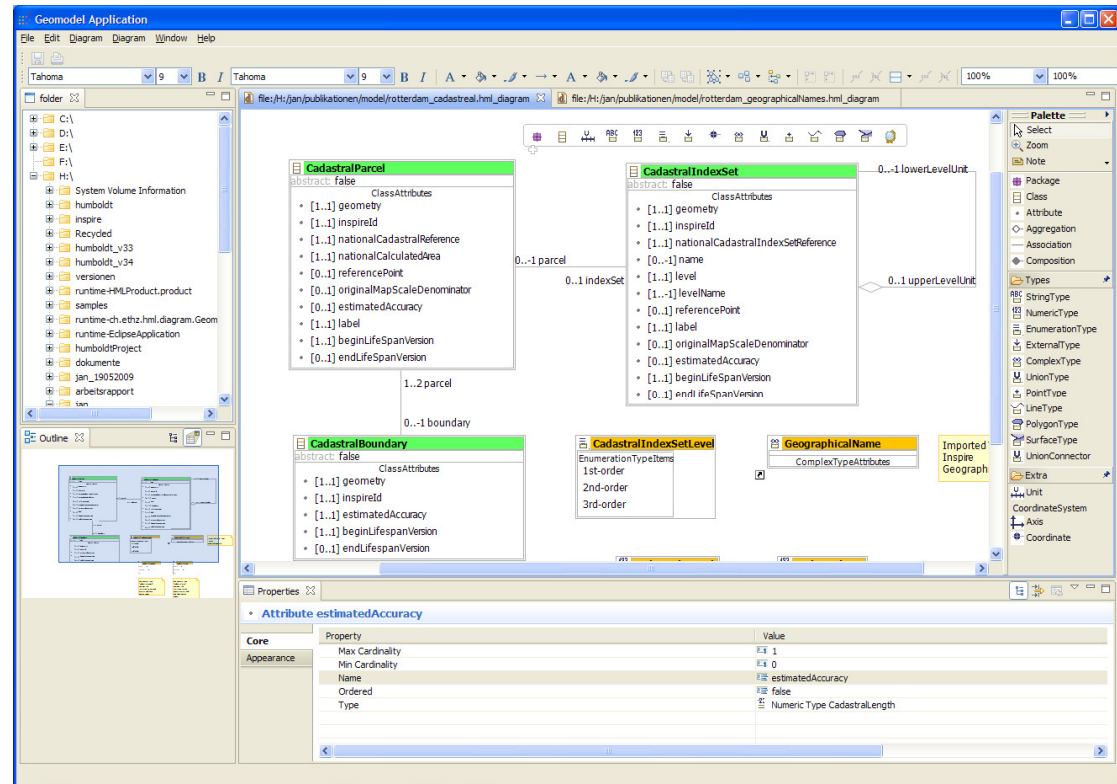
Santiago Cáceres, ETRA Research and Development

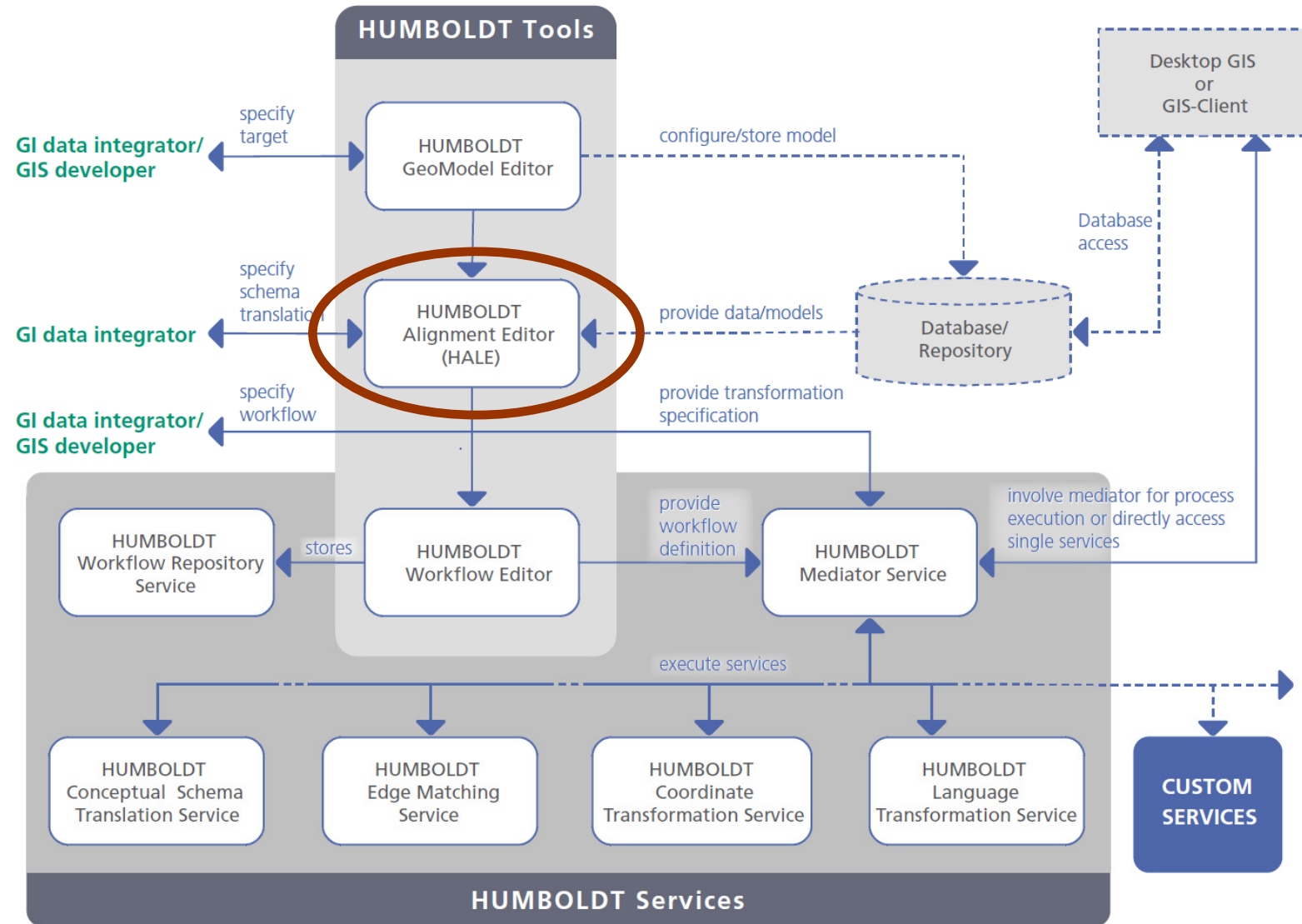




GeoModel Editor

- ▣ Visual editor specifically designed for developing complex application schemas for geodata
- ▣ Comes preconfigured with INSPIRE and GML schemas





Alignment Editor

- ▣ HUMBOLDT Alignment Editor is a tool for geodomain application experts and GI experts
- ▣ Provides means to *create mappings on the conceptual level* and to derive the schema transformation
- ▣ Ensures the validity of a mapping on the base of the source and target schema
- ▣ Can work with schemas created in the HUMBOLDT GeoModel Editor or other Modelling Tools



HUMBOLDT Alignment Editor 2.0.0.M1

File Configure

Schema Explorer

type filter text

- http://www.esdi-humboldt.org/waterVA
 - AbstractFeatureType
 - ft Watercourses_VA
 - ARC_UBALIN: <int>
 - BEMERKUNG: <BEMERKUNG>
 - FGW_ID: <FGW_ID>
 - FGW_ID_LON: <FGW_ID_LON>
 - FID_Maske_: <int>
 - FID_Waterc: <int>
 - FLU_50T_: <int>
 - FLU_50T_ID: <int>
 - FNODE_: <int>
 - Id: <int>
 - LAENGE_ARC: <double>
 - LAENGE_ROU: <double>
 - LENGTH: <double>
 - LEVEL: <int>
 - LPOLY_: <int>
 - NAME: <NAME>
 - OEK50_NAME: <OEK50_NAME>
 - ORDNUNG2: <int>
 - ORDSTRAHLE: <int>
 - RPOLY_: <int>
 - the_geom: <MultiLineStringPropertyType>
 - TNODE_: <int>
 - WRRL_EZGGR: <int>

Map Viewer

type filter text

- urn:x-inspire:specification:gmlas-v31:Hydrography:2.0
 - AbstractFeatureType
 - ft CatchmentArea
 - ft GlacierSnowfield
 - ft HydroFacility
 - ft HydroPointOfInterest
 - ft LandWaterBoundary
 - ft ManMadeObject
 - ft Sea
 - ft Shore
 - ft SurfaceWater
 - ft StandingWater
 - ft Watercourse
 - beginLifespanVersion: <dateTime>
 - drainsCatchment: <ReferenceType>
 - endLifespanVersion: <dateTime>
 - geographicalName: <GeographicalNamePropertyType>
 - GeographicalName: <GeographicalName>
 - grammaticalGender: <CodeType>
 - grammaticalNumber: <CodeType>
 - language: <string>
 - nativeValue: <EndonymExonymType>
 - pronunciationIPA: <string>
 - sourceOfName: <string>
 - spelling: <SpellingOfNamePropertyType>
 - status: <NameStatusType>
 - geometry: <GeometricPrimitivePropertyType>
 - hasConstruction: <ReferenceType>
 - hasEmbankment: <ReferenceType>
 - hydroid: <HydroIdentifier>

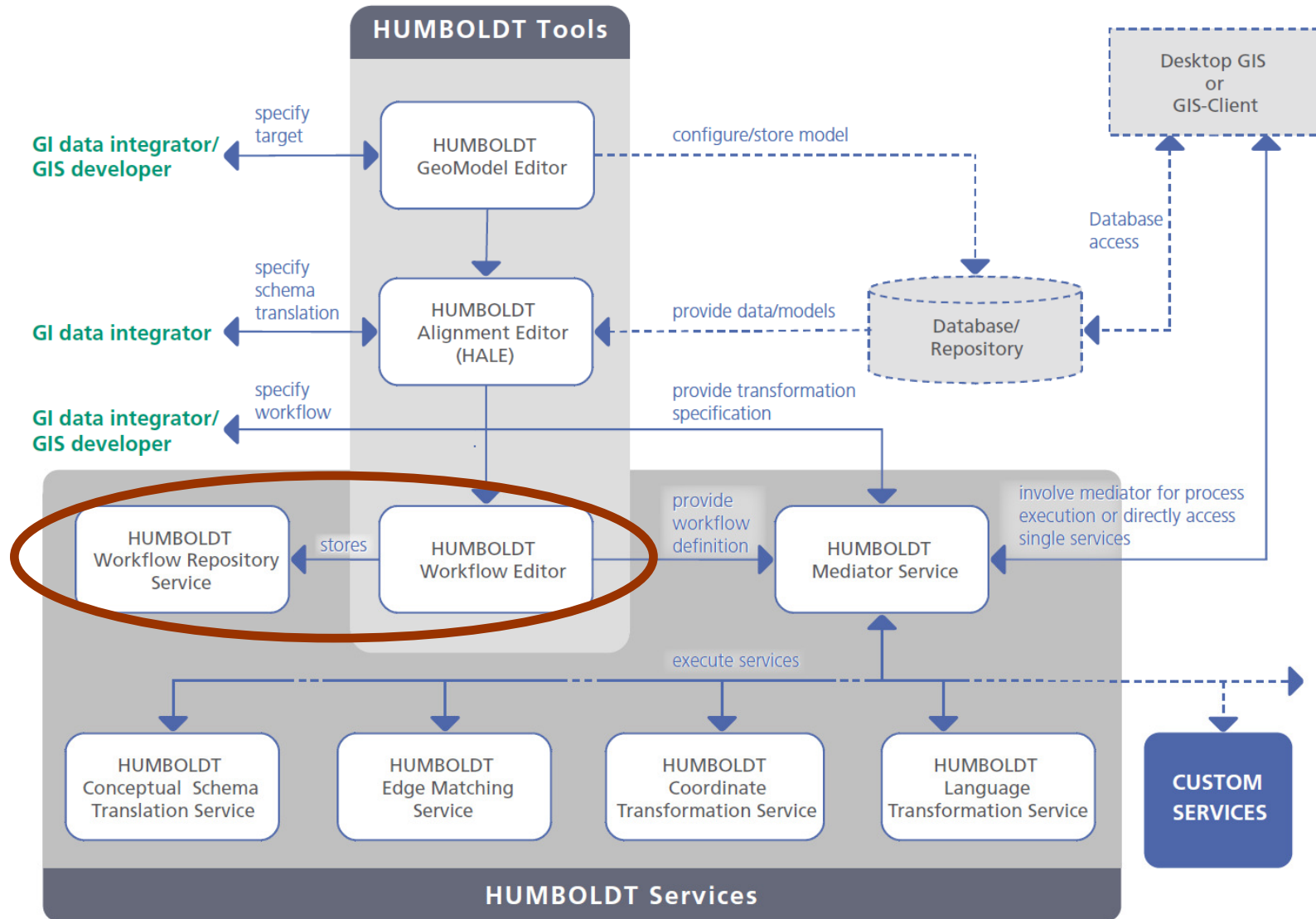
Mapping

Watercourses_VA.the_geom - SurfaceWater.geometry

Entity 1	Watercourses_VA.the_geom		
Entity 2	SurfaceWater.geometry		
Transformation	eu.esdihumboldt.cst.corefunctions.NetworkExpansionFunction		
BUFFERWIDTH	50		

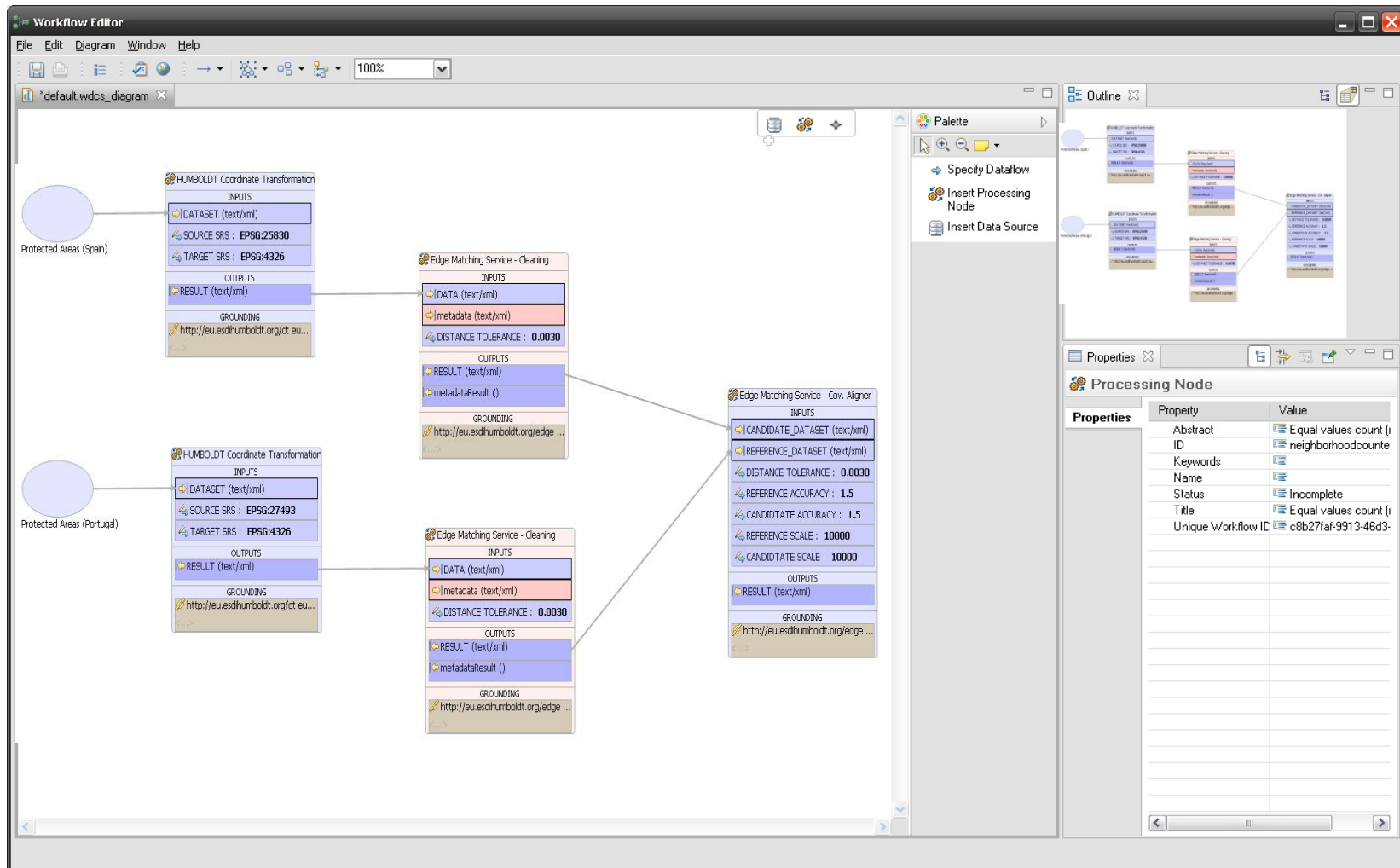
Tasks

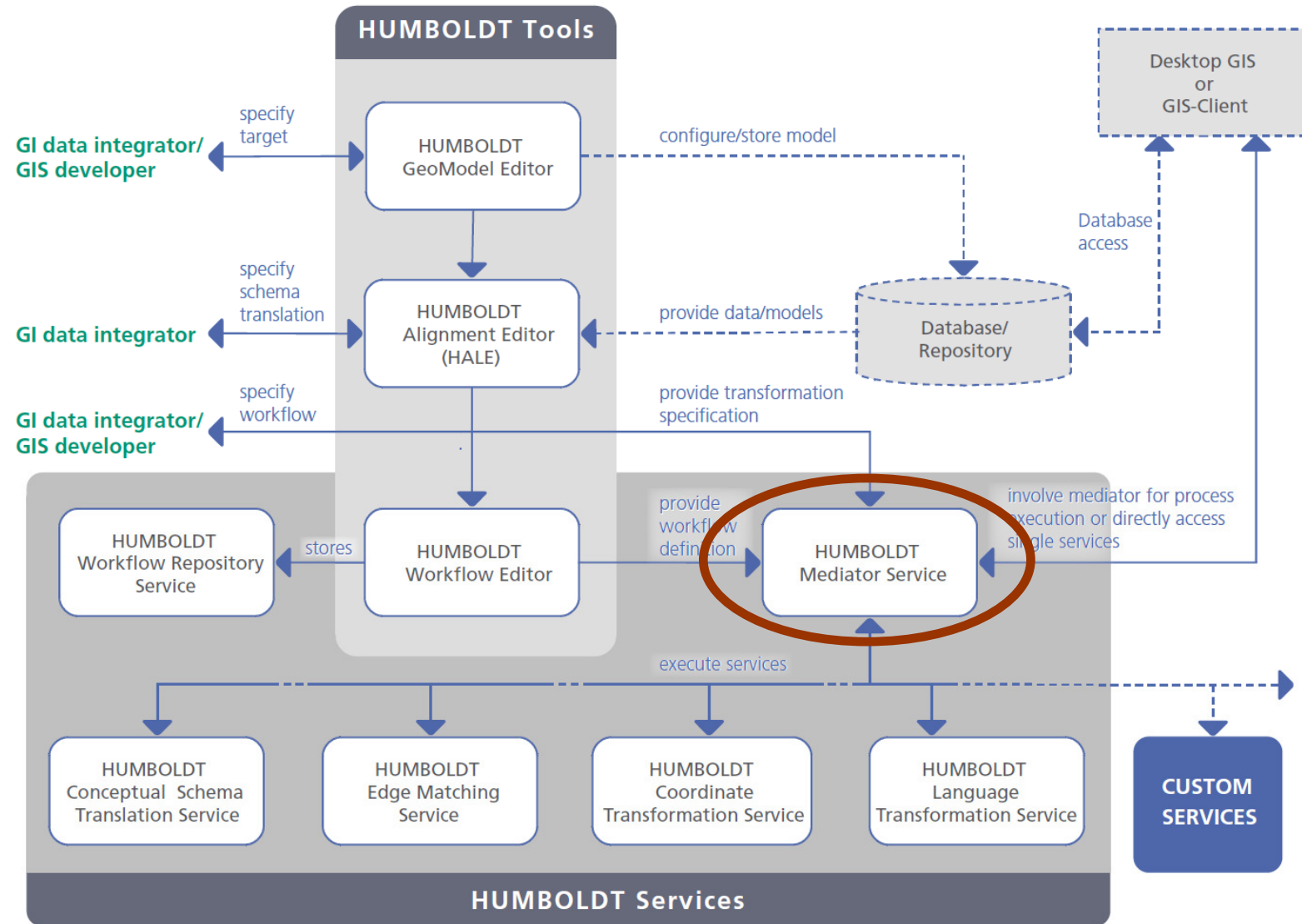
Description	!	#	Status	Comment
Target		4		
SurfaceWater		3		
Non-nullable attribute id is not mapped			New	
Non-nullable attribute levelOfDetail is not mapped			New	
Non-nullable attribute localType is not mapped			New	



Workflow Editor and Repository Service

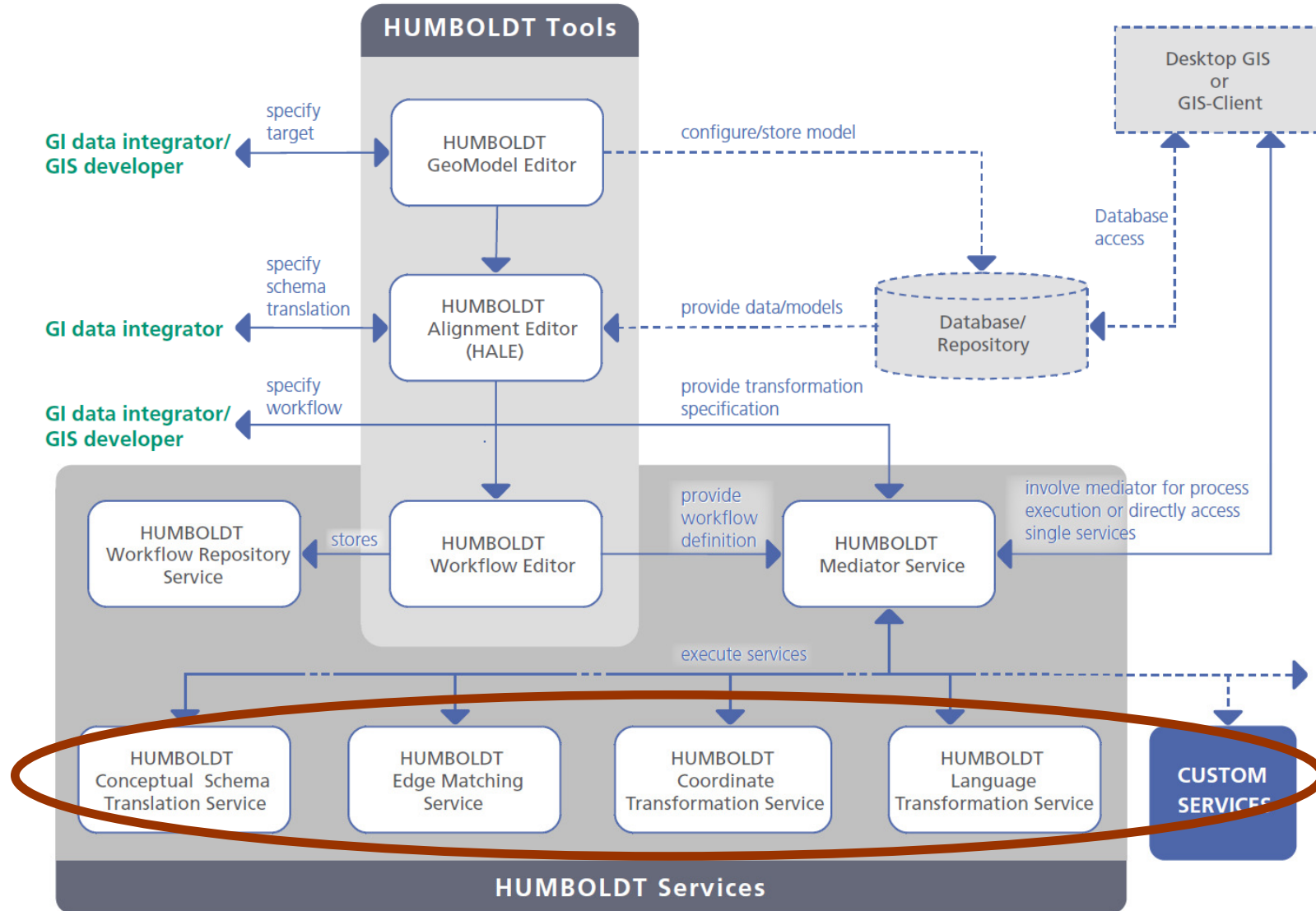
- ▣ Allow users to register processes to the system
- ▣ Allow users to visually compose the workflow graph out of geoprocessing components and data sources
- ▣ Manual or Semiautomatic Workflow Definition, Automated Execution
- ▣ Exports such workflows in different workflow dialects via a WSDL / SOAP Interface





Mediator Service

- ▣ Can act as a *Transformation Service*, as a *Download Service* or an *Invoke Spatial Services Service* that encapsulates the capability to execute predefined transformation workflows
- ▣ Execution of workflows retrieved from the HUMBOLDT Workflow Repository Service
- ▣ Ability to read data from Web Feature Services and Web Coverage Services and to feed into transformation services
- ▣ Ability to work with internal transformation services and external transformation services

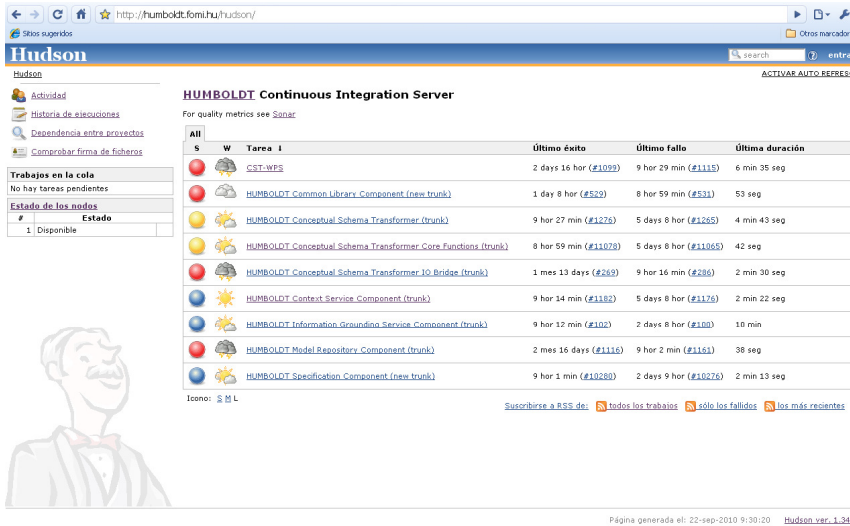


Processing Services

- ▣ *Conceptual Schema Transformer*: WPS for transforming data from one application schema to another
- ▣ *Edge Matching Service*: WPS implementation of a service that aligns edges and points of vector geometries so that they will be gapless
- ▣ *Coordinate Transformation Service*: WPS implementation of a service that allows to transform coordinates between various geographic reference systems
- ▣ *Language Transformation Service*: WPS that is capable of transforming/translating all information that becomes visible to a user from one language to another
- ▣ *... additional and custom services*

Technical Validation

- Goal: Ensure – at the end of the project – a high technical quality of the software products



Hudson
HUMBOLDT Continuous Integration Server

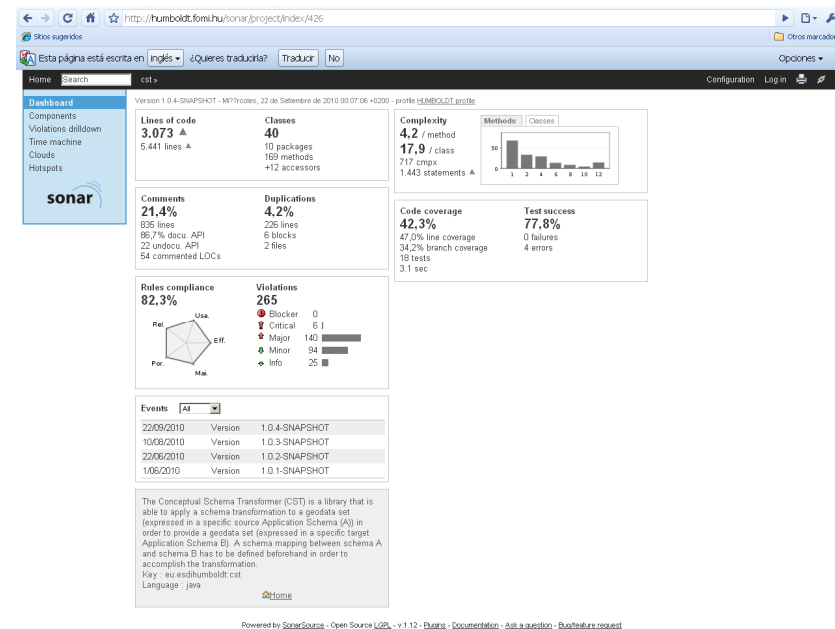
For quality metrics see [Sonar](#)

All	S	W	Tarea	Último éxito	Último fallo	Última duración
			CST-WFS	2 days 16 hor (#1099)	9 hor 29 min (#1115)	6 min 35 seg
			HUMBOLDT Common Library Component (new trunk)	1 day 8 hor (#529)	8 hor 59 min (#531)	53 seg
			HUMBOLDT Conceptual Schema Transformer (trunk)	9 hor 27 min (#1274)	5 days 6 hor (#1265)	4 min 43 seg
			HUMBOLDT Conceptual Schema Transformer.Core.Functions (trunk)	8 hor 59 min (#11078)	5 days 6 hor (#11060)	42 seg
			HUMBOLDT Conceptual Schema Transformer.IQ.Bridge (trunk)	1 mes 13 days (#269)	9 hor 16 min (#286)	2 min 30 seg
			HUMBOLDT Context Service Component (trunk)	9 hor 14 min (#1167)	5 days 6 hor (#1176)	2 min 22 seg
			HUMBOLDT Information Grounding Service Component (trunk)	9 hor 12 min (#102)	2 days 8 hor (#100)	10 min
			HUMBOLDT Model Repository Component (trunk)	2 mes 16 days (#1116)	9 hor 2 min (#1161)	38 seg
			HUMBOLDT Specification Component (new trunk)	9 hor 1 min (#10280)	2 days 9 hor (#10276)	2 min 13 seg

Icono: L

[Suscribirse a RSS de:](#) [todos los trabajos](#) [solo los fallidos](#) [los más recientes](#)

Página generada el: 22-sep-2010 9:30:20 Hudson ver. 1.348



sonar

Dashboard
Version 1.0.4-SNAPSHOT - MFTcoees, 22 de Setiembre de 2010 00:07:06 +0200 - profile HUMBOLDT_profile

Lines of code 3,073 ▲ 5,441 lines ▲	Classes 40 10 packages 163 methods +12 accessors	Complexity 4.2 / method 17.9 / class 717 emp. 1,443 statements ▲
Comments 21.4% 835 lines 16.7% docu. API 22 undocu. API 54 commented LOCs	Duplications 4.2% 226 lines 6 blocks 2 files	Code coverage 42.3% 47.0% line coverage 34.2% branch coverage 18 tests 3.1 sec
Rules compliance 82.3%	Violations 265 Blocker 0 Critical 6 1 Major 140 Minor 94 Info 25	Test success 77.8% 0 failures 4 errors

Events [All]

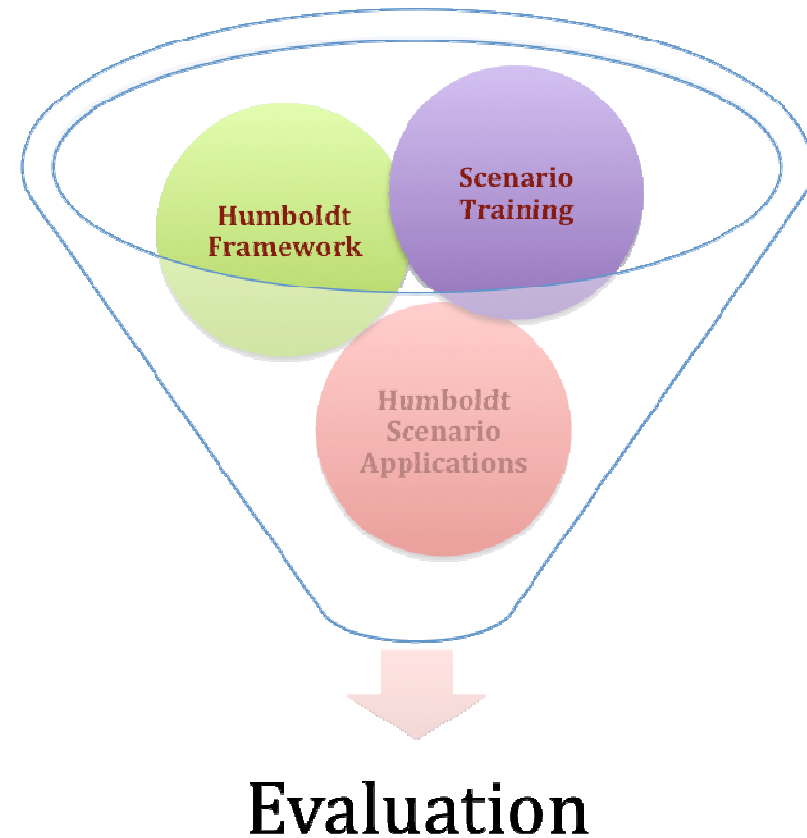
22/09/2010	Version	1.0.4-SNAPSHOT
10/08/2010	Version	1.0.3-SNAPSHOT
22/06/2010	Version	1.0.2-SNAPSHOT
1/05/2010	Version	1.0.1-SNAPSHOT

The Conceptual Schema Transformer (CST) is a library that is able to apply a schema transformation to a geodata set (expressed in a specific source Application Schema (A)) in order to provide a geodata set (expressed in a specific target Application Schema B). A schema mapping between schema A and schema B has to be defined beforehand in order to accomplish the transformation.
Key : su.esdi.humboldt.cst
Language : java

Powered by [SonarSource](#) - [Open Source](#) [LOCL](#) - v1.12 - [Plugins](#) - [Documentation](#) - [Ask a question](#) - [Bugfeature request](#)

User Evaluation

- ▣ Methodology
 - ▣ Based on CIM (Criteria Indicator Metrics) approach
 - ▣ Usage of Questionnaires
 - ▣ Statistical results



User Evaluation

- ▣ Evaluation of HALE
 - ▣ 13 independent testers
 - ▣ Overall mark 6.5/10
 - ▣ Strengths
 - ▣ Easy installation
 - ▣ Good interface
 - ▣ Simple way of mapping
 - ▣ Weaknesses
 - ▣ Language available (only English)

