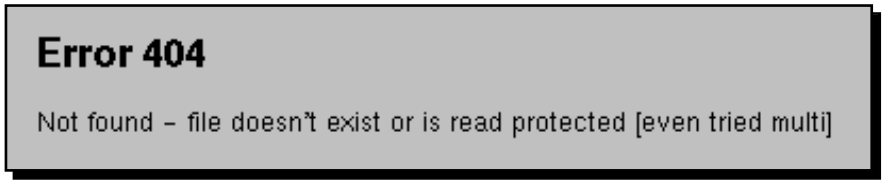
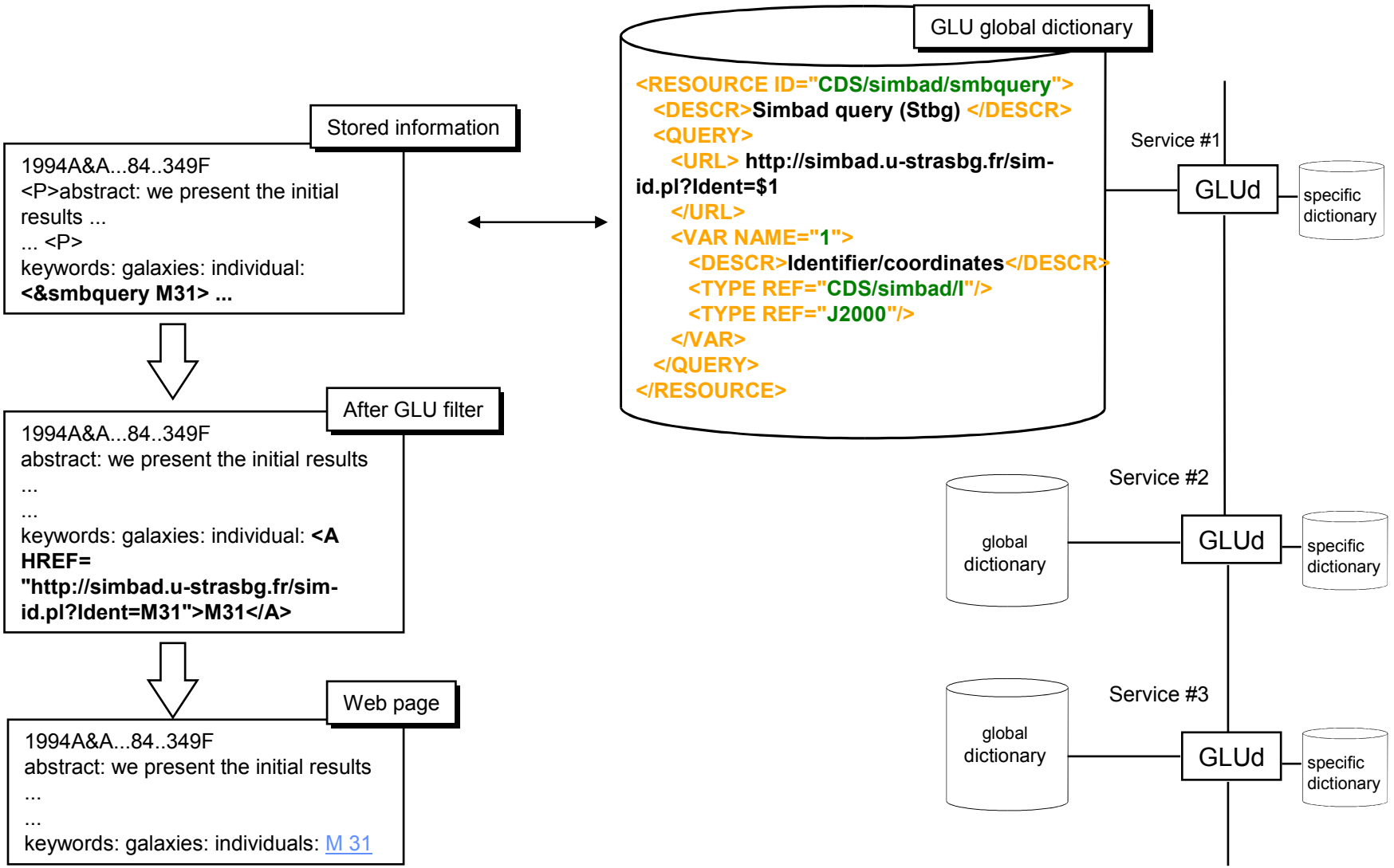
GLU: Générateur de Liens Uniformes



- **Purpuse :**
  - **Avoid storing hardcoded URLs**
  - **On the fly generation of hyperlinks**
  - **Easy maintenance of a set of links used in applications**
  - **Better inter-operability of web services**

- **Concepts :**
  - ***Glu dictionary*** **maintaining URLs according to data types or resource names**
  - ***Glu filter*** **substituting data type and resource name tags for the generated URLs. Management of parameters**
  - ***Glu daemon*** **maintaining on each participating service a global dictionary. Mirror site tests.**

GLU : How it works



GLU : the data dictionary

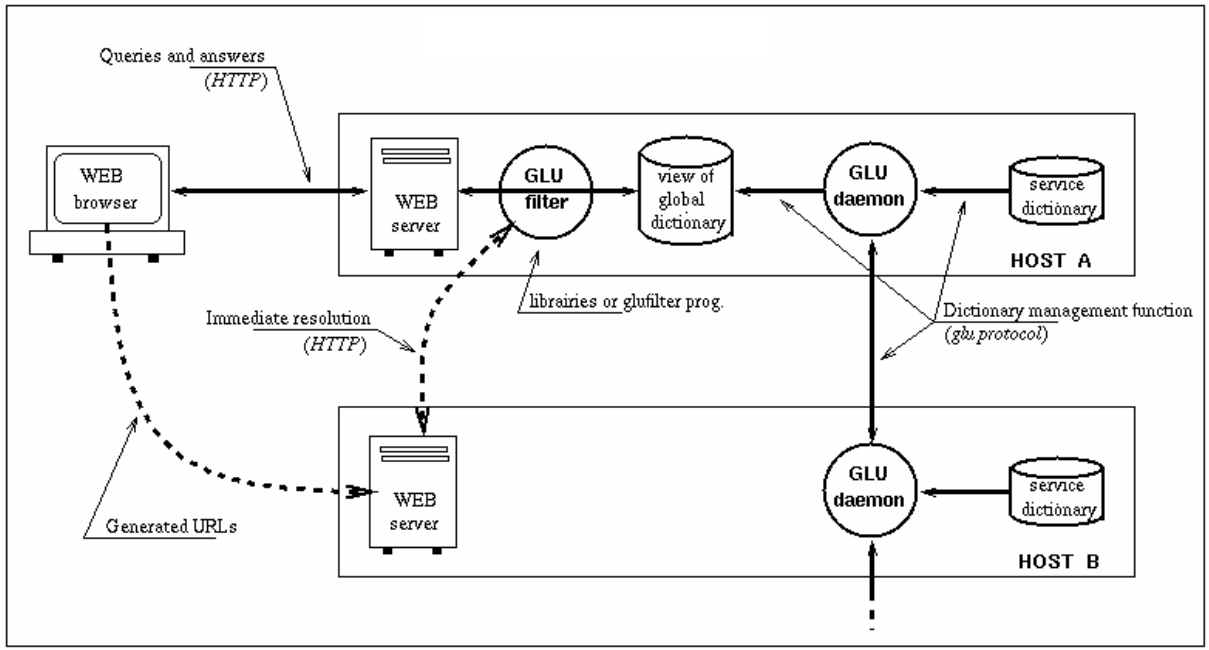
- **Three kind of dictionaries :**
  - ***specific dictionary*** **: containing all records defining URLs needed to access a particular service. This dictionary is maintained by the manager of the service.**
  - ***global dictionary*** **: general dictionary build by the GLU daemon by receiving the entries from all specific dictionaries participating to a domain.**
  - ***personal dictionary*** **: particular dictionary used by an application to overload some definitions of the global dictionary. This dictionary is unknown from the GLU daemon and introduced directly by the application.**

- **The dictionary is a distributed database. Each service maintains its own part, containing its URL definitions.**

- **A global dictionary is accessible at each participating site, improving substitution performances.**

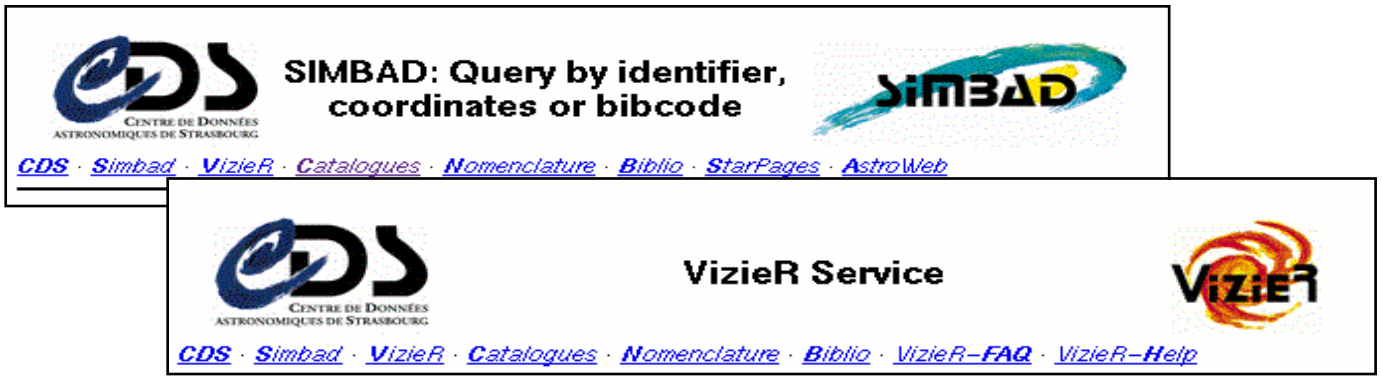
GLU : the GLU daemon

- **A GLU daemon is active on every site managing a glu dictionary**
- **It maintains the global dictionary from a set of specific, service related, dictionaries**
- **It tests regularly mirror site resources**
- **A GLU daemon knows the specific dictionaries for which it is server**
- **It knows the domains in which it is a client, and receives the specific dictionaries from the corresponding servers**



GLU : other functionalities

- **HTML text can be added to an URL definition : allows creation of homogeneous pages**

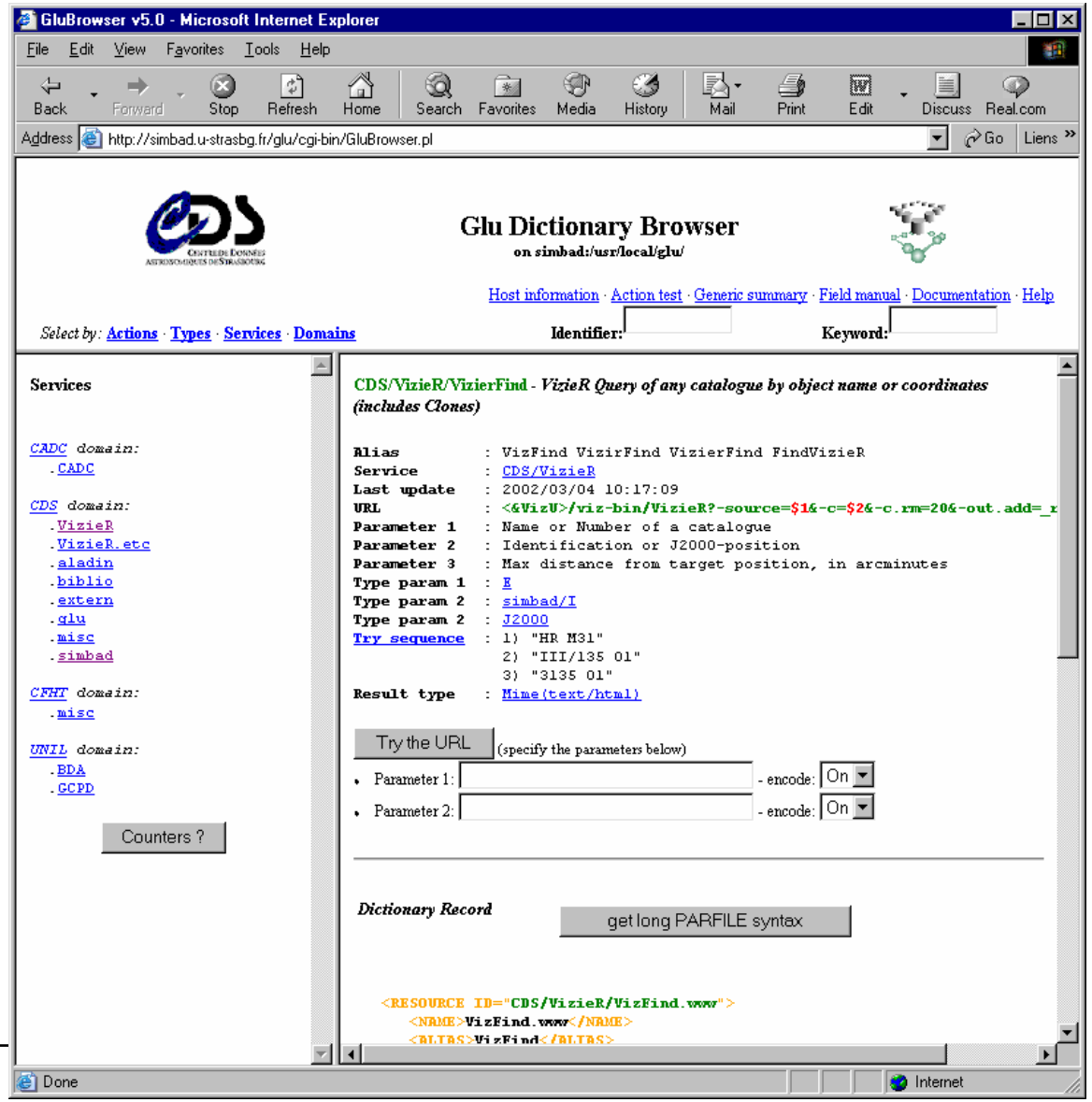


- **A GLU dictionary entry can contain other GLU tags, allowing recursive substitutions**
- **Parameter conversions to adjust resource required parameters and user parameters**
- **Immediate resolution : instead of substituting an URL, the GLU filter behaves like a web client, and substitutes the glu tag for the result of the URL call.**
- **Test of data availablility : either by calling an URL, either by executing a test sequence (only on a local basis).**
  This allows conditional writing of an URL, only if data exists.
- **URL testing with recorded test data used as parameters. This allows to check all the URLs used by a service.**
- **Management of clones : by checking regularly all the URLs defined for the same resource and labelling the best one (fastest, nearest)**

GLU : specific tools

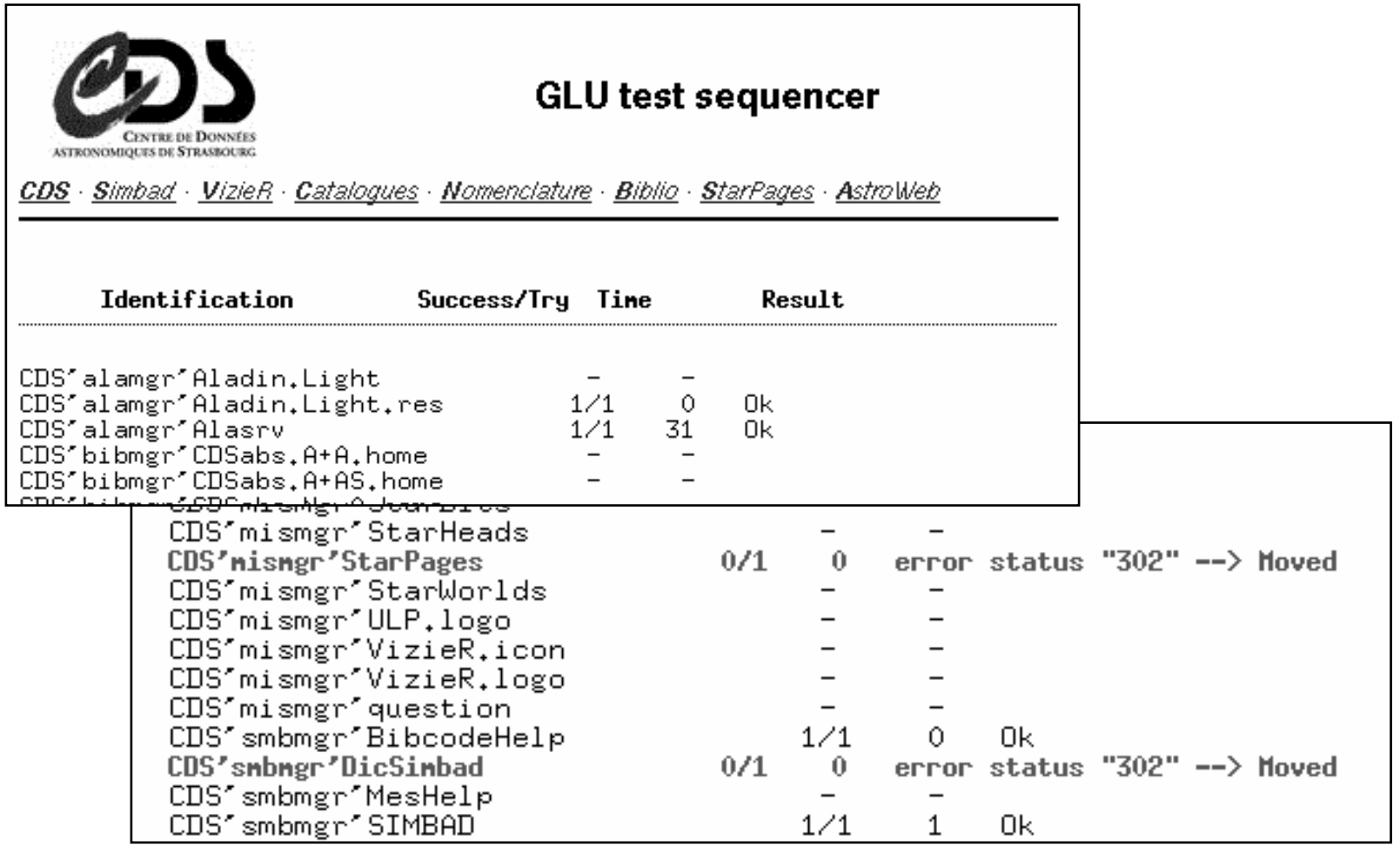
Dictionary browser :

- displays the dictionary by entry, by domain, ...
- Allow execution of any URL with provided parameters.
- Allows the remote management of the GLU daemon.



GLU : specific tools

Test sequencer : **checks all URLs defined in a dictionary and dislays a report.**



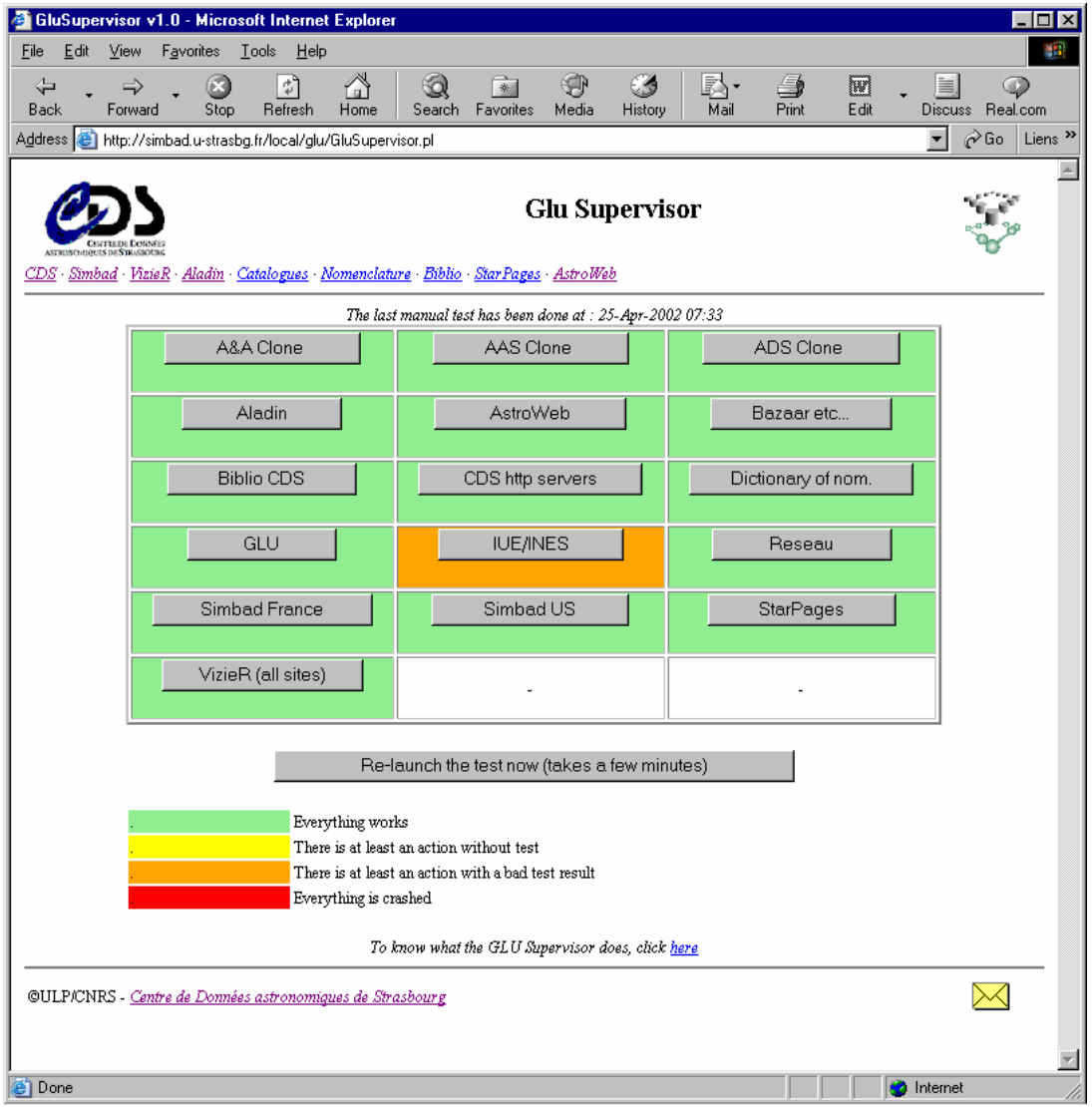
CENTRE DE DONNÉES ASTRONOMIQUES DE STRASBOURG

GLU test sequencer

CDS · Simbad · VizieR · Catalogues · Nomenclature · Biblio · StarPages · AstroWeb

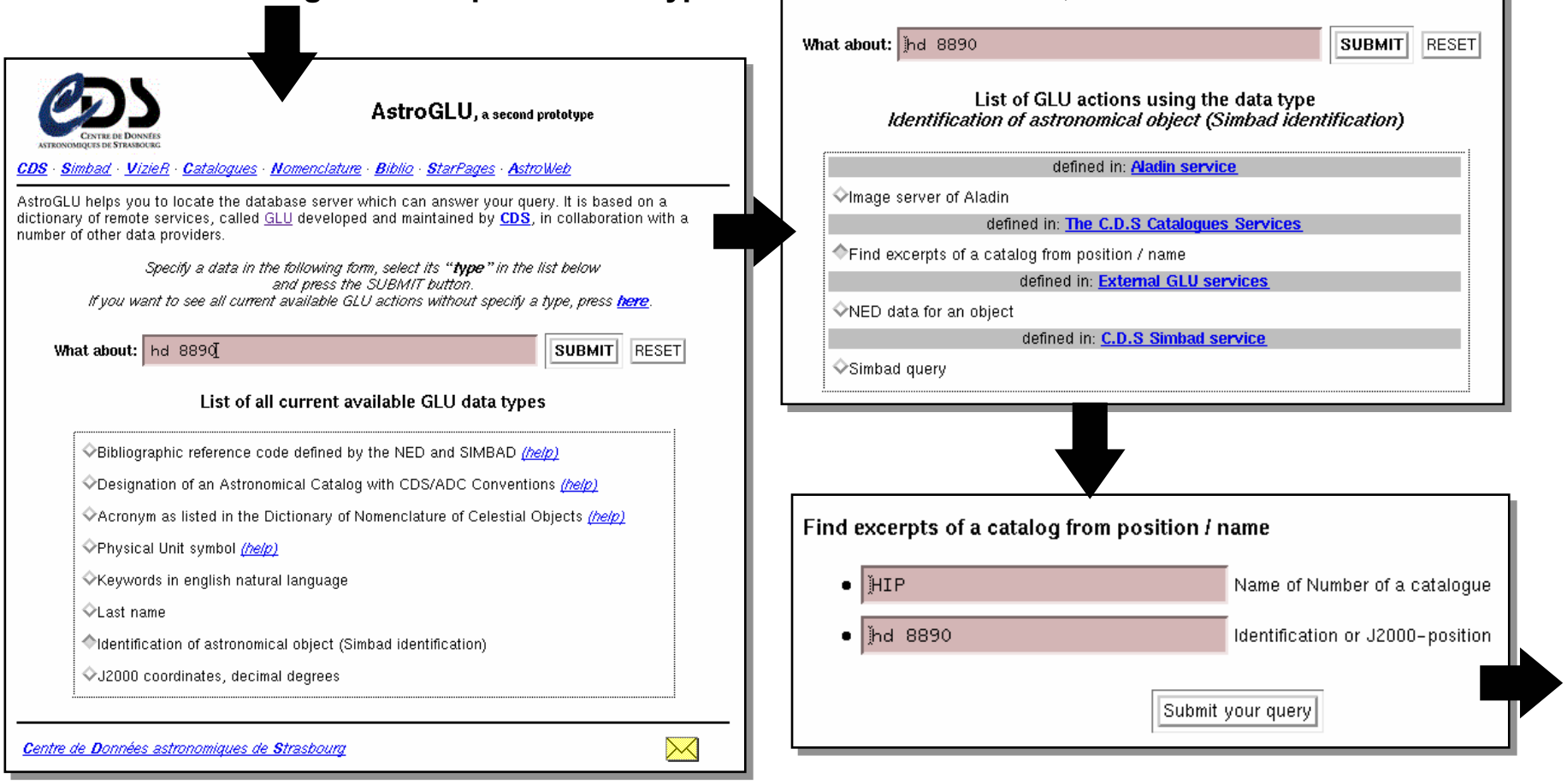
Identification	Success/Try	Time	Result
CDS'alamgr'Aladin.Light	-	-	
CDS'alamgr'Aladin.Light.res	1/1	0	Ok
CDS'alamgr'Alasrv	1/1	31	Ok
CDS'bibmgr'CDSabs.A+A.home	-	-	
CDS'bibmgr'CDSabs.A+AS.home	-	-	
CDS'mismgr'StarHeads	-	-	
CDS'mismgr'StarPages	0/1	0	error status "302" --> Moved
CDS'mismgr'StarWorlds	-	-	
CDS'mismgr'ULP.logo	-	-	
CDS'mismgr'VizieR.icon	-	-	
CDS'mismgr'VizieR.logo	-	-	
CDS'mismgr'question	-	-	
CDS'smbmgr'BibcodeHelp	1/1	0	Ok
CDS'smbmgr'DicSimbad	0/1	0	error status "302" --> Moved
CDS'smbmgr'MesHelp	-	-	
CDS'smbmgr'SIMBAD	1/1	1	Ok

GLU : specific tools



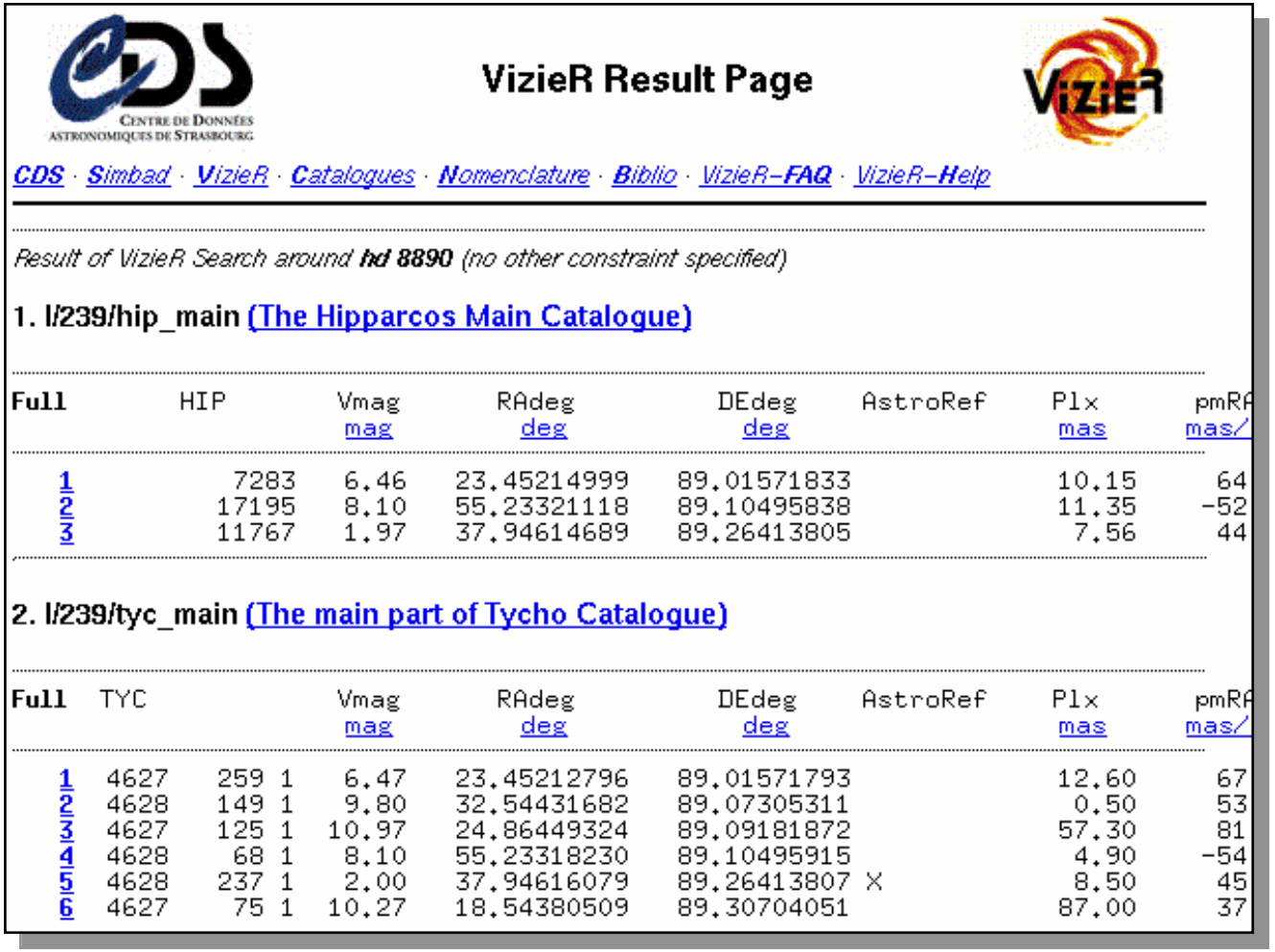
GLU : specific tools

AstroGLU : a reversed usage of the dictionary. To get all services knowing something about a specific data type.



GLU specific tools

AstroGLU



VizieR Result Page

CDS · Simbad · VizieR · Catalogues · Nomenclature · Biblio · VizieR-FAQ · VizieR-Help

Result of VizieR Search around ***hd 8890*** *(no other constraint specified)*

1. I/239/hip_main (The Hipparcos Main Catalogue)

Full	HIP	Vmag mag	RAdeg deg	DEdeg deg	AstroRef	Plx mas	pmRA mas/
1	7283	6.46	23.45214999	89.01571833		10.15	64
2	17195	8.10	55.23321118	89.10495838		11.35	-52
3	11767	1.97	37.94614689	89.26413805		7.56	44

2. I/239/tyc_main (The main part of Tycho Catalogue)

Full	TYC	Vmag mag	RAdeg deg	DEdeg deg	AstroRef	Plx mas	pmRA mas/
1	4627 259 1	6.47	23.45212796	89.01571793		12.60	67
2	4628 149 1	9.80	32.54431682	89.07305311		0.50	53
3	4627 125 1	10.97	24.86449324	89.09181872		57.30	81
4	4628 68 1	8.10	55.23318230	89.10495915		4.90	-54
5	4628 237 1	2.00	37.94616079	89.26413807	X	8.50	45
6	4627 75 1	10.27	18.54380509	89.30704051		87.00	37

GLU : documentation

- **GLU documentation and access :**
  - **Documentation and project follow-up :**
    `http://simbad.u-strasbg.fr/glu/glu.htx`
  - **GLU dictionary browser :**
    `http://simbad.u-strasbg.fr/glu/cgi-bin/GluBrowser.pl`
  - **AstroGLU :**
    `http://simbad.u-strasbg.fr/glu/cgi-bin/astroglu.pl`