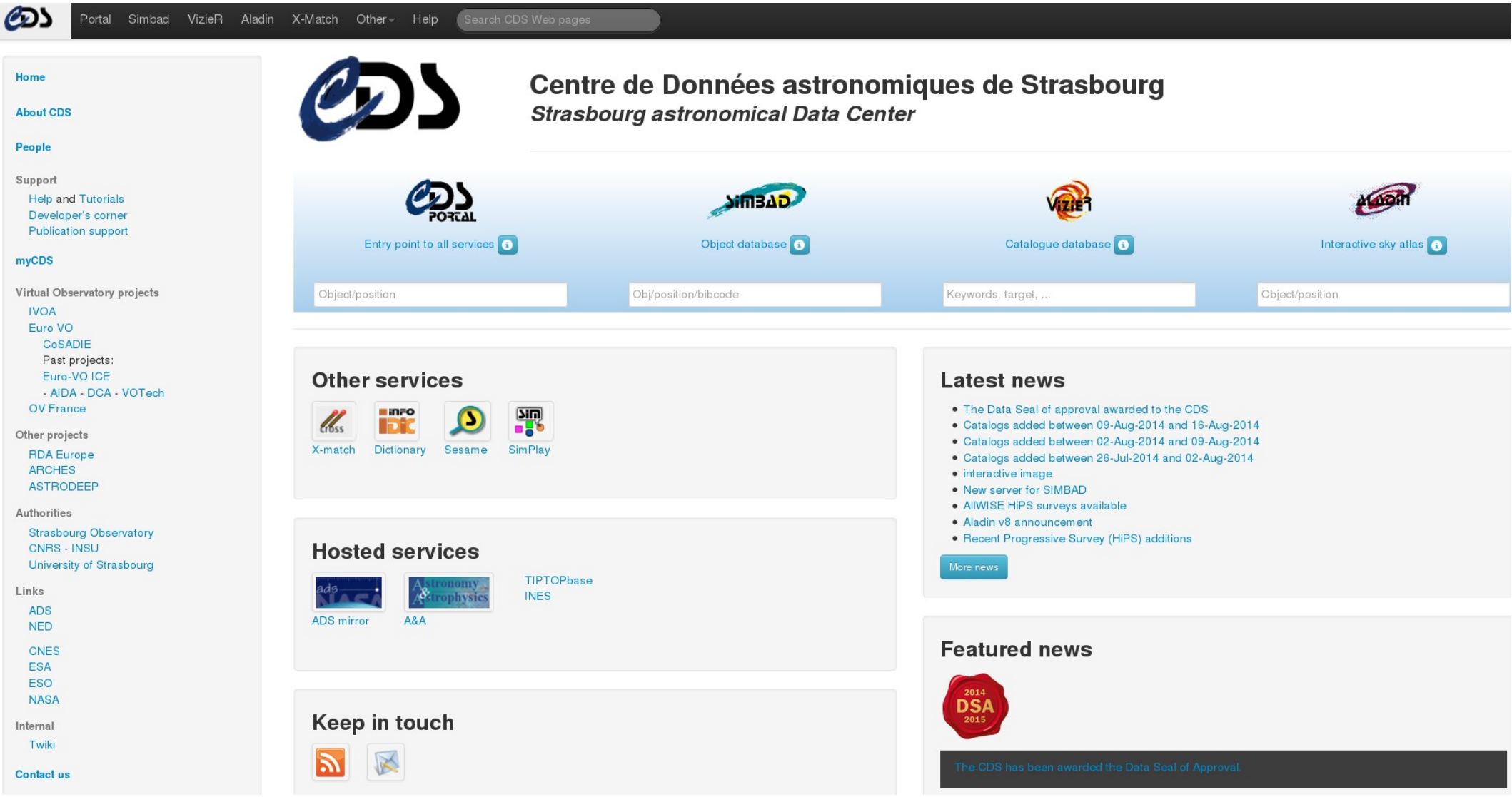
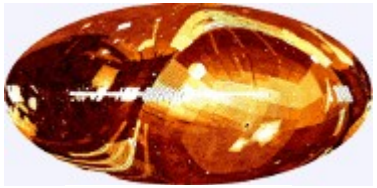
Working together at CDS : the symbiosis between astronomers, documentalists & developers



Working together at CDS : the symbiosis between astronomers, documentalists & developers



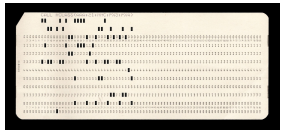


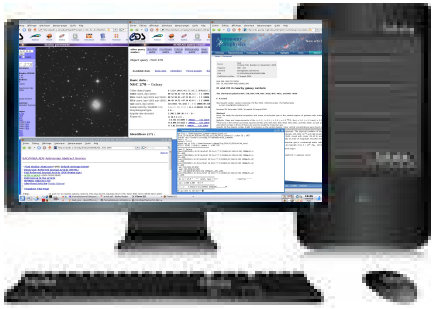

VizieR & SIMBAD created and maintained by astronomers, documentalists & computer engineers :

- An historical overview
- Definition and roles of these 3 profiles today

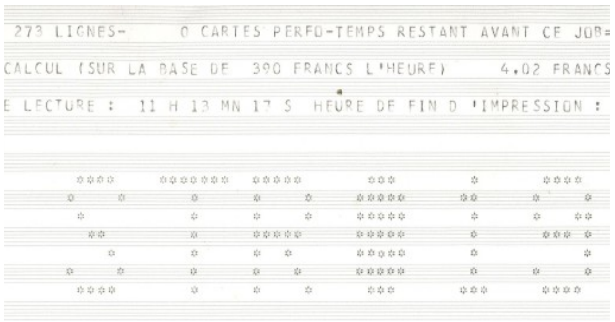
CDS technological evolution

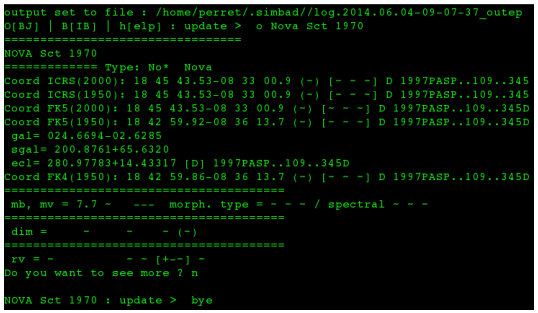
1972 | 1980 | 1990 | 1993 | 1998 | 2006 | 2008 | 2014

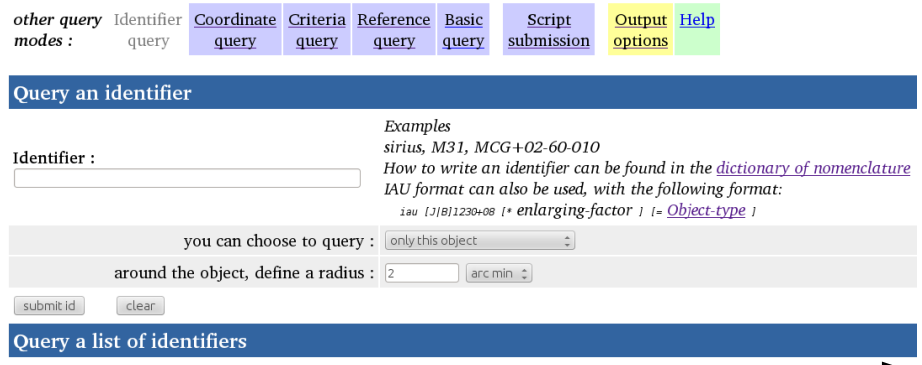




Punched card | Alpha 20 | vt100 | Terminal X | PC | 500 To







CSI | SIMBAD2 | SIMBAD3 | - Web | SIMBAD4

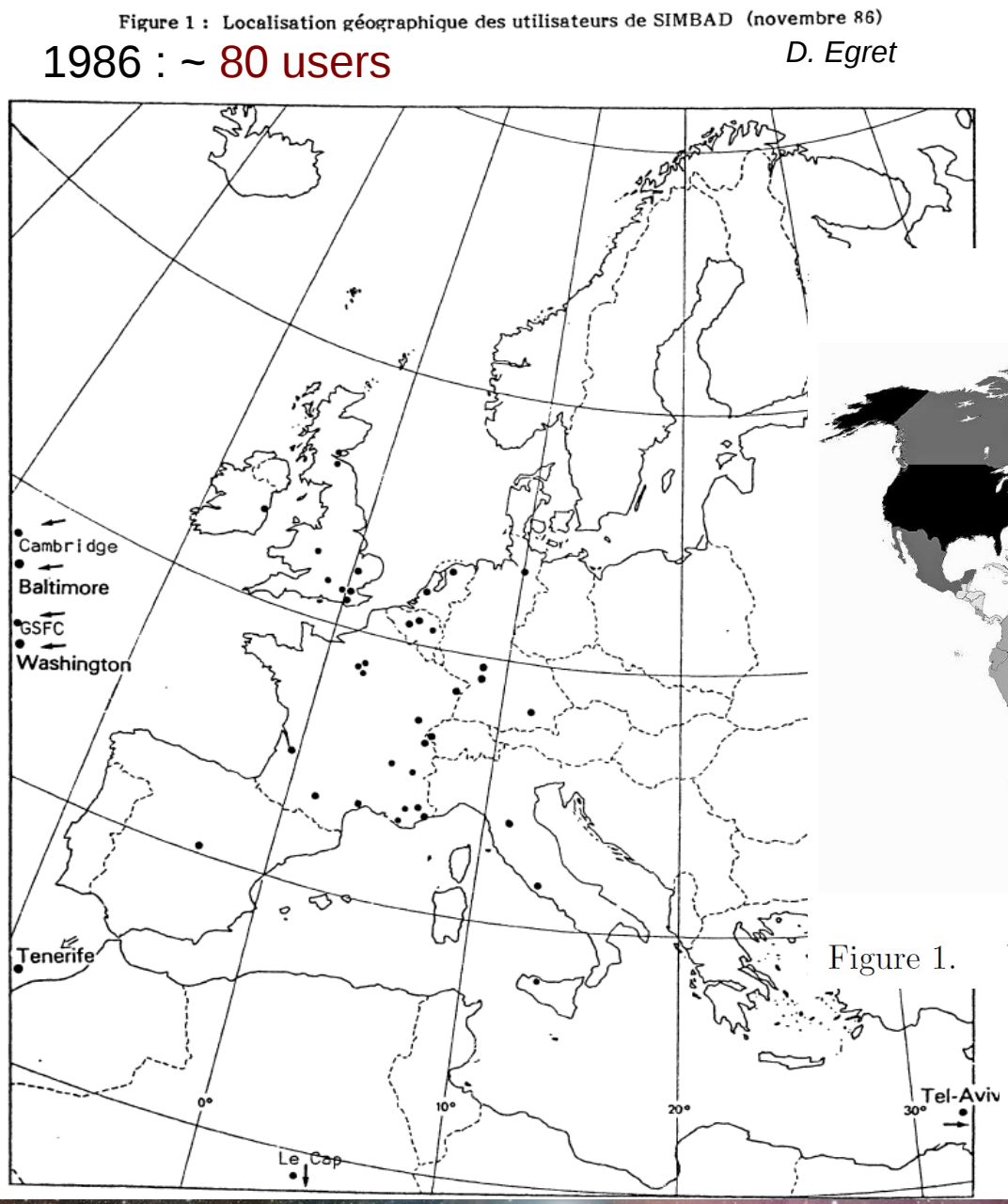
Raccord | Aladin | DJIN | COSIM

Magnetic bands & microfiches | Catalogs | VizieR | TAPVizieR

Users evolution (quantitatively)

1986 : ~ 80 users

D. Egret



2001 : user accounts end ~8000

(M. Wenger, priv. com.)

Wenger and Oberto *2010ASPC.434.453*

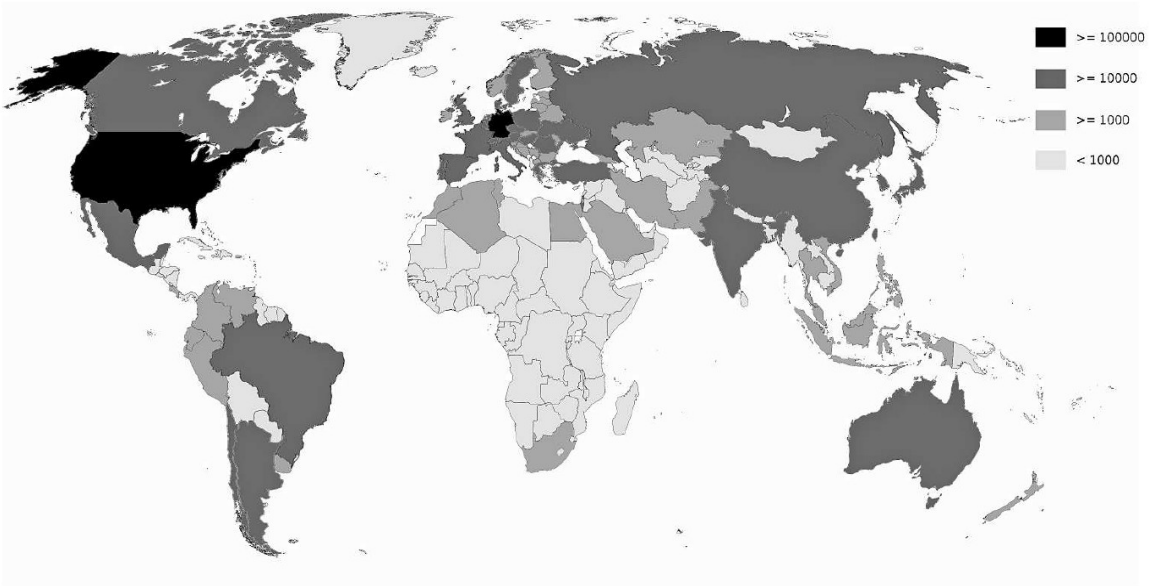


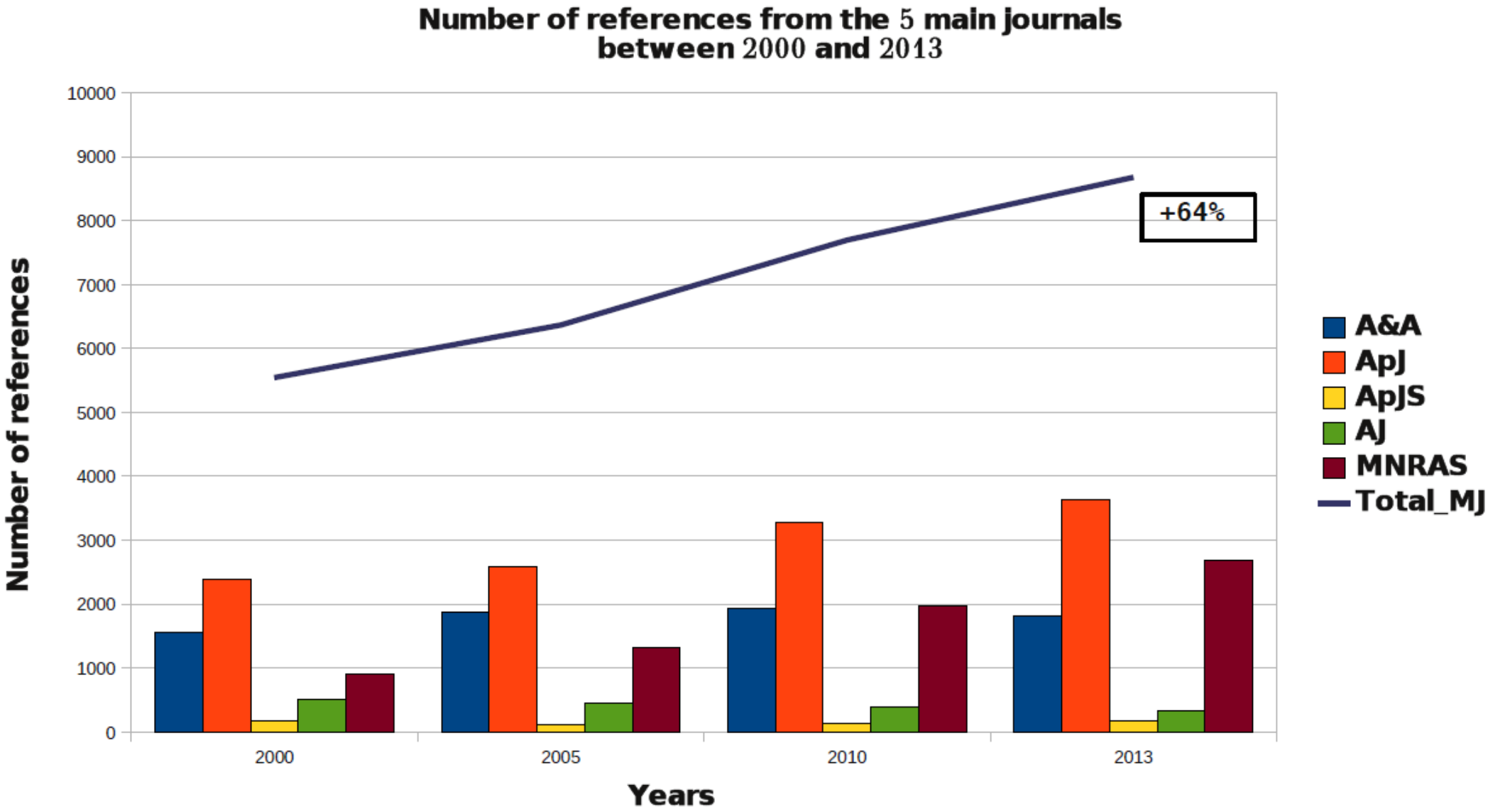
Figure 1. Users/country

IP adress counts
June 2009: **>~100,000** in the US

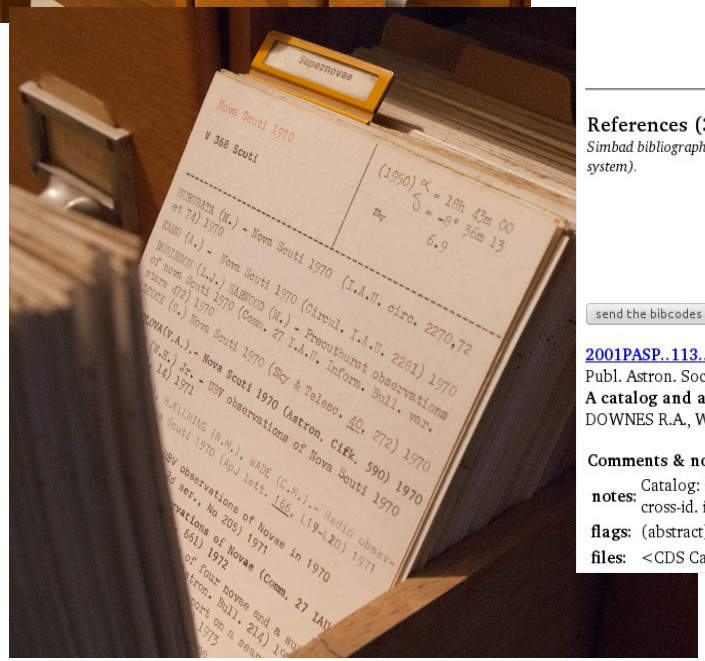
2013/2014 : ~506,000 requests per day for SIMBAD (SIMBAD talk)

Quantitive evolution of the amount of references treated from 2000 to 2013

From S. Lesteven :



Data evolution (qualitatively)



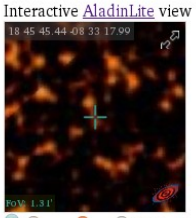
Basic data :

NOVA Sct 1970 -- Nova

query around with radius 2 arcmin

Other object types:	V* (V*,AAVSO) , No* (NOVA)
ICRS coord. (ep=J2000) :	18 45 43.53 -08 33 00.9 (~) [~ ~ ~] D 1997PASP..109..345D
FK5 coord. (ep=J2000 eq=2000) :	18 45 43.53 -08 33 00.9 (~) [~ ~ ~] D 1997PASP..109..345D
FK4 coord. (ep=B1950 eq=1950) :	18 42 59.86 -08 36 13.7 (~) [~ ~ ~] D 1997PASP..109..345D
Gal coord. (ep=J2000) :	024.6694 -02.6285 (~) [~ ~ ~] D 1997PASP..109..345D
Fluxes (1) :	B 7.7 [~] V4 E 2003AstL...29..468S

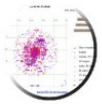
Interactive AladinLite view



Identifiers (3) :

NOVA Sct 1970 V* V368 Sct

Plots and Images


plot


CDS portal

radius 10 arcmin

References (32 between 1850 and 2014)

Simbad bibliographic survey began in 1950 for stars (at least bright stars) and in 19 system).

Sort reference summaries by : (not exhaustive, explai

Date | Title|Abstract|Keyword | In table

send the bibcodes to ADS

2001PASP..113..764D [0]
Publ. Astron. Soc. Pac., 113, 764-768 (2001)
A catalog and atlas of cataclysmic variables: the living edition.
DOWNES R.A., WEBBINK R.F., SHARA M.M., RITTER H., KOLB U. and DI

Comments & notes:

notes: Catalog: Objects with a format 'CCC N' are '[DWS97] CCC N' in SI cross-id. in other columns of the catalog (via http://icarus.stsci.ed
flags: (abstract)
files: <CDS Catalogue: V/123>

Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

VizieR Result Page

Send to VO tools

Show the target form
Show constraint information

The 6 columns in *color* are computed by VizieR, and are *not part of the original data*.

II/199A/stars Radio continuum emission from stars (Wendker, 1995) 1995A&AS..109..177W ReadMe+ftp
Post annotation Positions and designations of the stars *(3021 rows)*

start AladinLite

Full	_r arcsec	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	Seq	Name	Alias	Det	RA1950 "h:m:s"	DE1950 "d:m:s"	Data	_RA.icrs "h:m:s"	_DE.icrs "d:m:s"
1	1.984	18 45 43.66	-08 33 01.2	2447	NOV Sct 1970		D	18 42 59.990	-08 36 14.00	Data	18 45 43.663	-08 33 01.17

V/123A/cv Catalog of Cataclysmic Variables (Downes+ 2001-2006) 2001PASP..113..764D ReadMe+ftp
Post annotation Catalog of cataclysmic variables, Final Version (February 2006) *(1830 rows)*

start AladinLite

Full	_r arcsec	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	R	GCVS	RAJ2000 "h:m:s"	DEJ2000 "d:m:s"	VarType	l	Maxmag mag	n_	l	Minmag mag	n_	Names
1	0.42	18 45 43.55	-08 33 01.2		V368 Sct	18 45 43.55	-08 33 01.2	NA		6.9	v		19.0	p	

B/gcvs/gcvs_cat General Catalogue of Variable Stars (Samus+ 2007-2013) ReadMe+ftp
1 annotation(s) - *post* The GCVS Catalog (Vol. I-III, version 2013-04-30) *(47969 rows)*

start AladinLite

Full	_r arcsec	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	GCVS	RAJ2000 "h:m:s"	DEJ2000 "d:m:s"	VarType	f_GCVS	n_GCVS	magMax mag	Period d	SpType
1	1.4	18 45 43.6	-08 33 00	V0368 Sct	18 45 43.6	-08 33 00	NA			7.700		pec(NOVA)

B/vsx/vsx AAVSO International Variable Star Index VSX (Watson+, 2006-2014) ReadMe+ftp
Post annotation Variable Star indeX, Version 2014-05-19 *(285852 rows)* 2006SASS...25...47W

start AladinLite

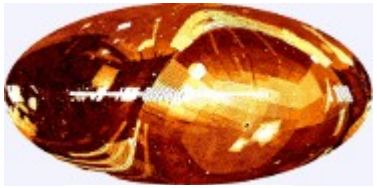
Full	_r arcsec	_RAJ2000 "h:m:s"	_DEJ2000 "d:m:s"	Name	RAJ2000 deg	DEJ2000 deg	Period d	OID	n_	VType	l	max mag	u_	n_	f_	l_	min mag	u_	n_
1	1.55	18 45 43.62	-08 33 00.1	V0368 Sct	281.43175	-08.55003		34484	B	0	NA	7.700		pg			19.300		pg

Available Visualisations:
- Plot of II/199A/stars V/123A/cv B/gcvs/gcvs_cat B/vsx/vsx in this region with Aladin-Java
- Optical Image of this region with Aladin-Java

→ Thanks for acknowledging the VizieR Service

© UDS/CNRS

Working together at CDS : the symbiosis between astronomers, documentalists & IT specialists

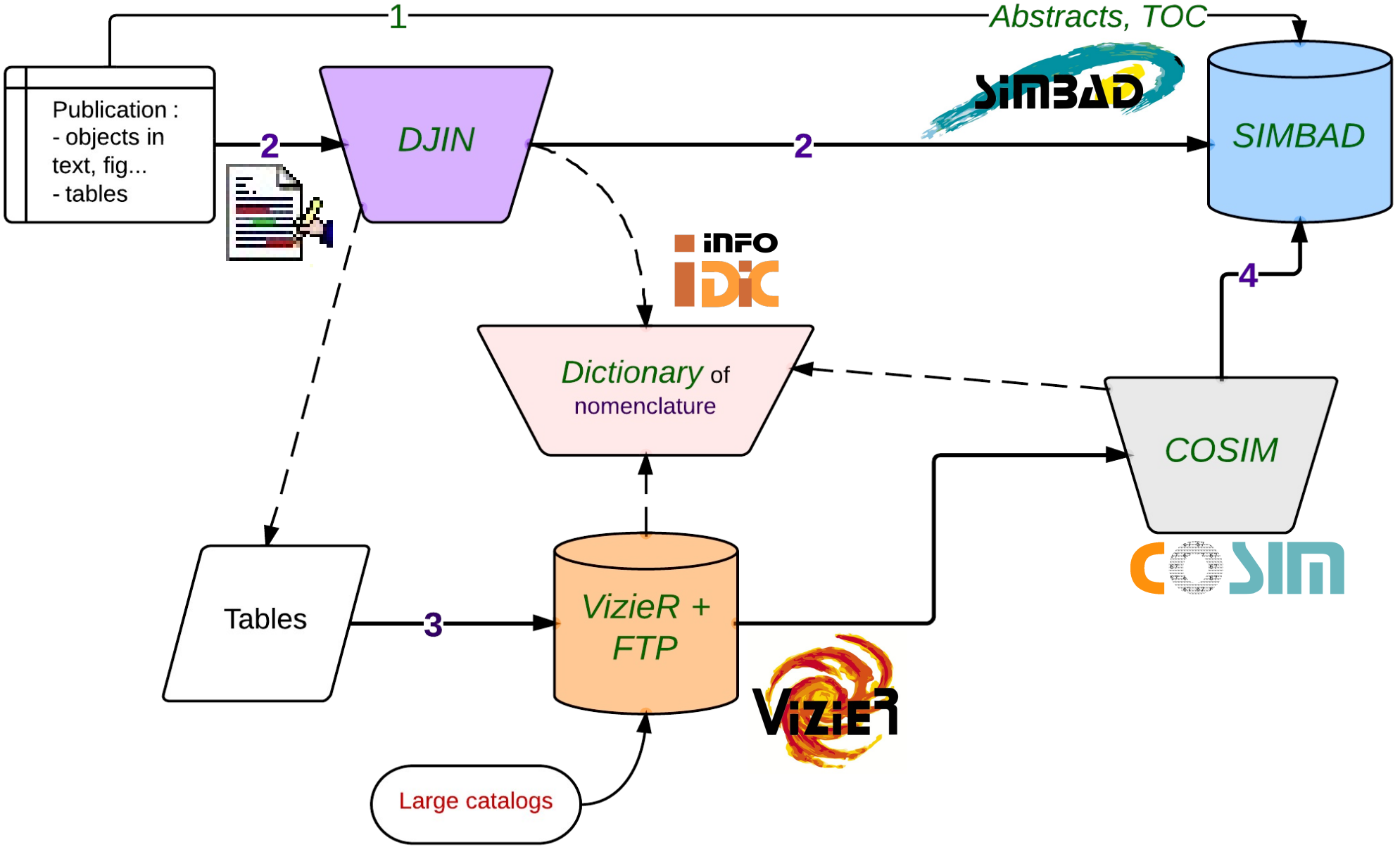




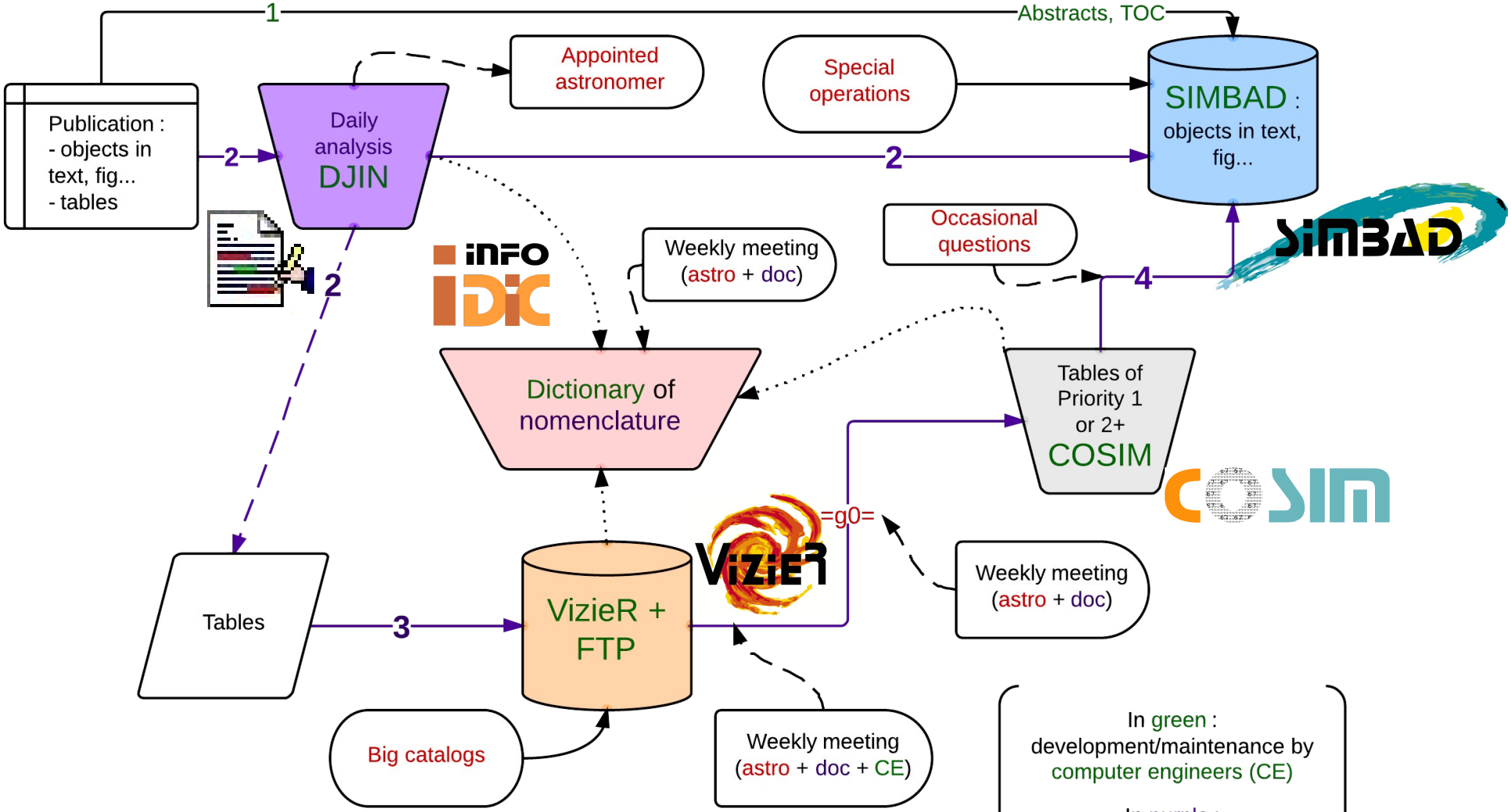
VizieR & SIMBAD created and maintained by astronomers, documentalists & computer engineers :

- An historical overview
- Definition and roles of these 3 profiles today

Information transfer chain

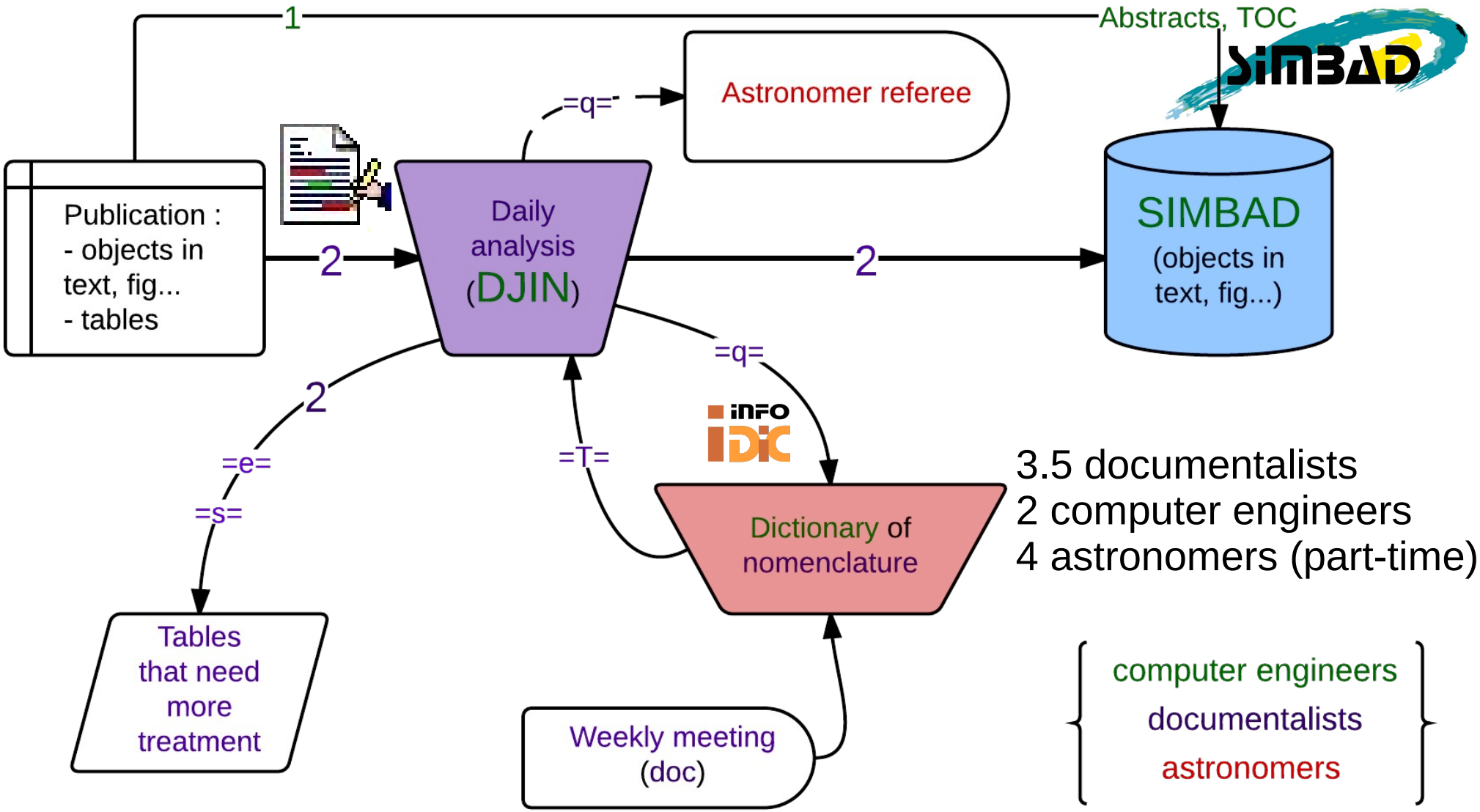


Interactions between the CDS staff to feed VizieR and SIMBAD



Interactions between astronomers, documentalists and computer engineers to feed SIMBAD & VizieR

Interactions between the CDS staff (DJIN team)



Interactions between the documentalists and astronomers (DJIN team): examples of questions

SIMBAD/article incoherence (scission/merge) :

- In SIMBAD : [MWZ90] OMC-2 FIR 4 = [NCM2003] MIR 24 = **HOPS 108** whereas in 2014ApJ.786.26, [NCM2003] MIR 24 = **HOPS 64**?
- Is [SCK2004] G020.08-0.14 N, the same object as IRAS 18253-1130 & [ABJ2009] U20.08-0.14 also used in 2013MNRAS.431.2385X for this region?

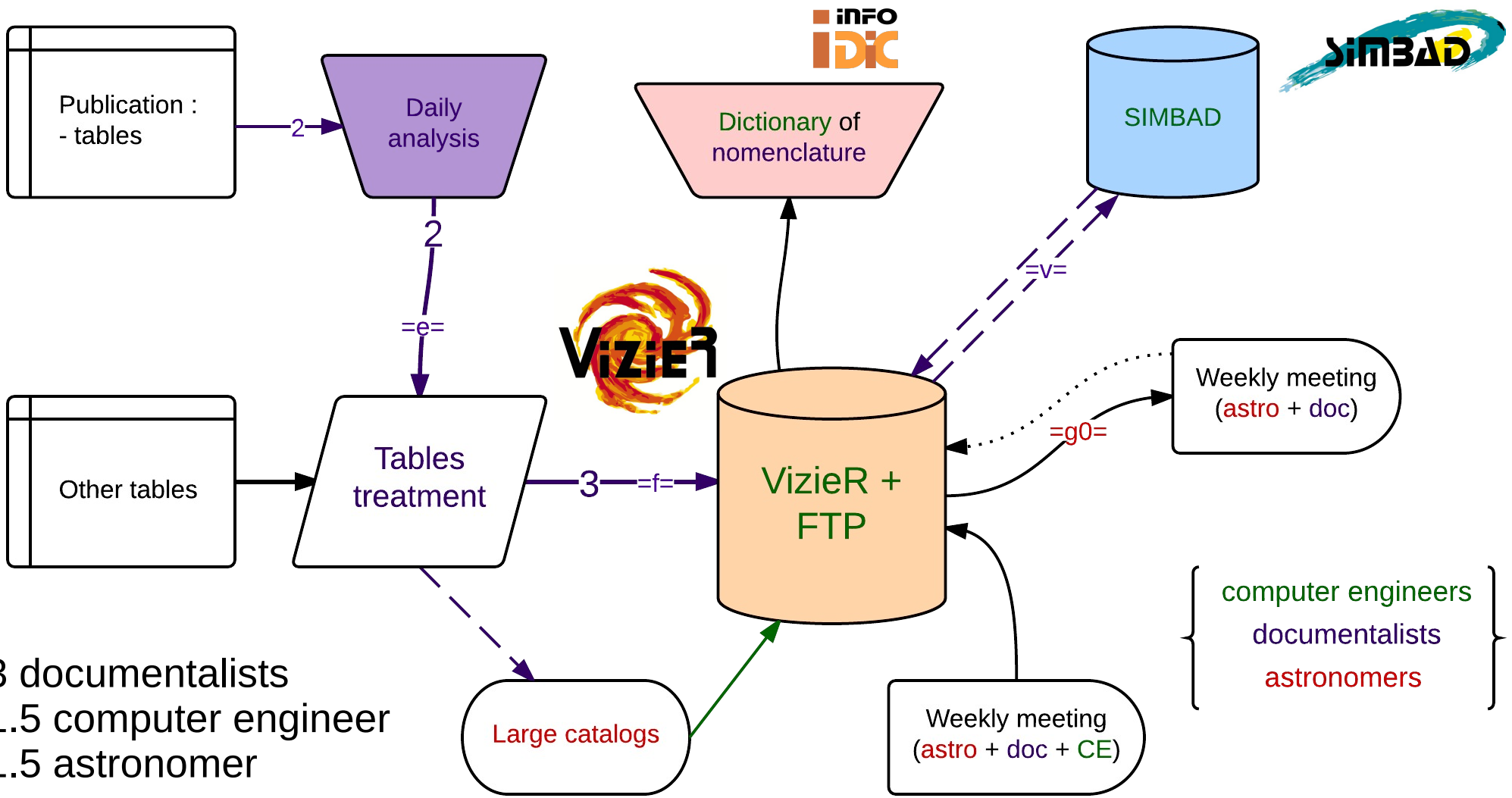
Is it for SIMBAD ?

- 2014ApJ.788.122, Tables 1 & 2 : for SIMBAD? (answer : tough one ! These are objects but part of molecular clouds with peculiar properties without correspondence in the SIMBAD object list...)

Do we have to change data in SIMBAD ?

- 2014MNRAS.437.2017T, Table 1 : redshifts for Q0107-025A & B are not the same in Simbad : which one to keep (with which quality)?
- 2013MNRAS.431.1005D, Table 2: Is there a hierarchical link to add to IC 2391, and in that case, with which probability?

Interactions between the CDS staff (VizieR team)



3 documentalists
1.5 computer engineer
1.5 astronomer

See also G. Landais poster & talk

Interactions between documentalists and astronomers (VizieR team) : example of questions

Technical problems :

- What should I do with this kind of FITS file that cannot be handled with the regular commands ?
- UCD « PHOT_SB_IR » not understood by the program which stops there...
- The graphic does not work...

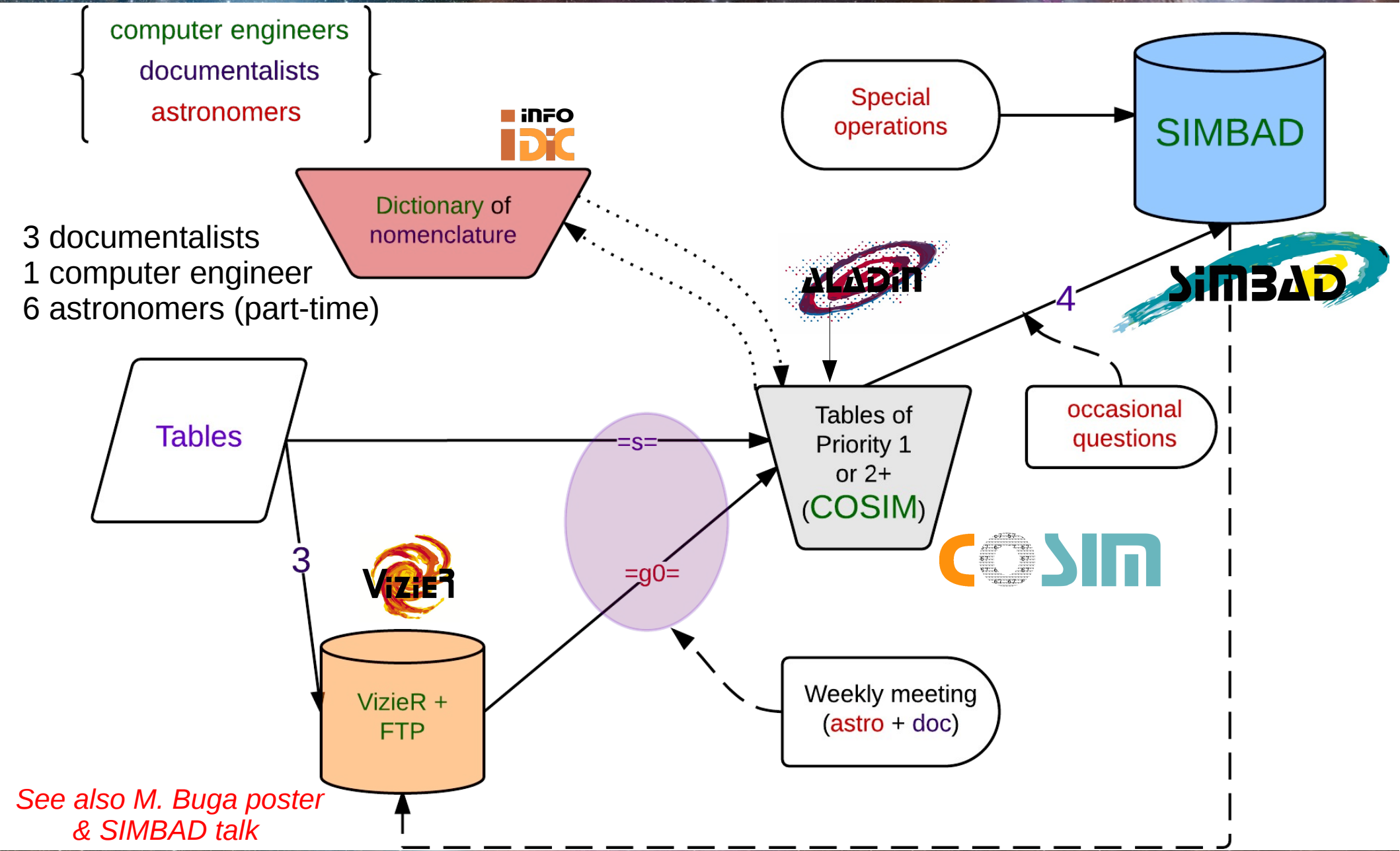
General astronomical problems :

- Why do I have <-0.555 in the online table whereas I have -1 -9 0.455 in my prepared table ? (when the HR=-1 or 1, we have limit value intervals in the three columns HR and lower, upper errors so it is the same thing!)
- « tau » (cooling time) from this other reference (J/ApJS/156/47) or this work?

Identification problems to link objects to SIMBAD :

- J/ApJS/190/233/table10 : 561 HII regions without coordinates like +264-037 or H13 to be retrieved from 54 different references not all with acronyms...

Interactions between the CDS staff (COSIM team)



Interactions between documentalists and astronomers (COSIM team) : example of questions

Merge/scission discussions

- 2011A&A...530A..60M: NVSS J114454+195130 at 2.6" of a GiC, merge?
- In the Bootes and First Look Survey fields, can I merge the 2MASS and ELAIS IR sources?
- Should I create the BC component of this WDS system or do I add the reference on the existing WDS J06071+3228B and WDS J06071+3228C?
- Follow the cross-id with FIRST 132030.9+332608 and AX J132032+3326 given in table 7?

Precisions about data to add in SIMBAD

- 2014A&A.562A.24M: if C* in SIMBAD, replace object type by AB*; sr*; Mi*?
- Are these magnitudes calculated in the AB or Vega Photometric System?
- What is the wavelength of the measured radial velocity from this table?
- Do I put a hierarchy between SL504 and the clusters LMC0511 and LMC0512?

Is a new acronym needed ?

- « This supernova host galaxy is not really detected. Is an acronym necessary in that case? »
- « For these microlensing events, it is possible to retrieve the official EWS name (from the OGLE website). However would an acronym be useful to keep track of the nomenclature used here (since the names look like EWS names, but the positions don't match)?"
- "Should we add a format to the acronym to take into account the QSOs only mentioned by their redshift in Table 1?"

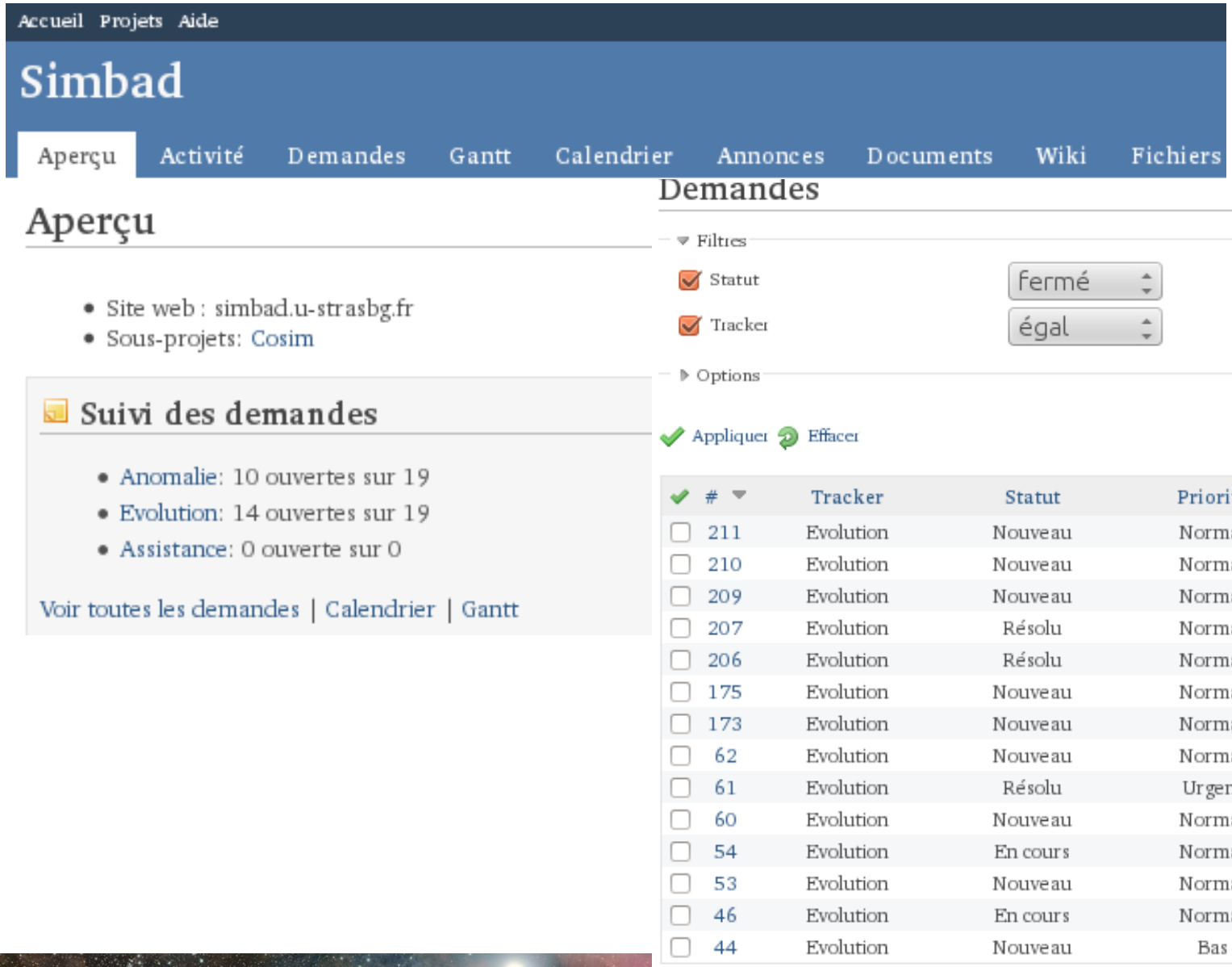
Internal interactions between Astronomers, Computer engineers and documentalists

Knowledge management, in-service training & informal communication

See also E. Son & A. Eisele poster

Internal interactions between Astronomers, Computer engineers and documentalists

Knowledge management & in-service training

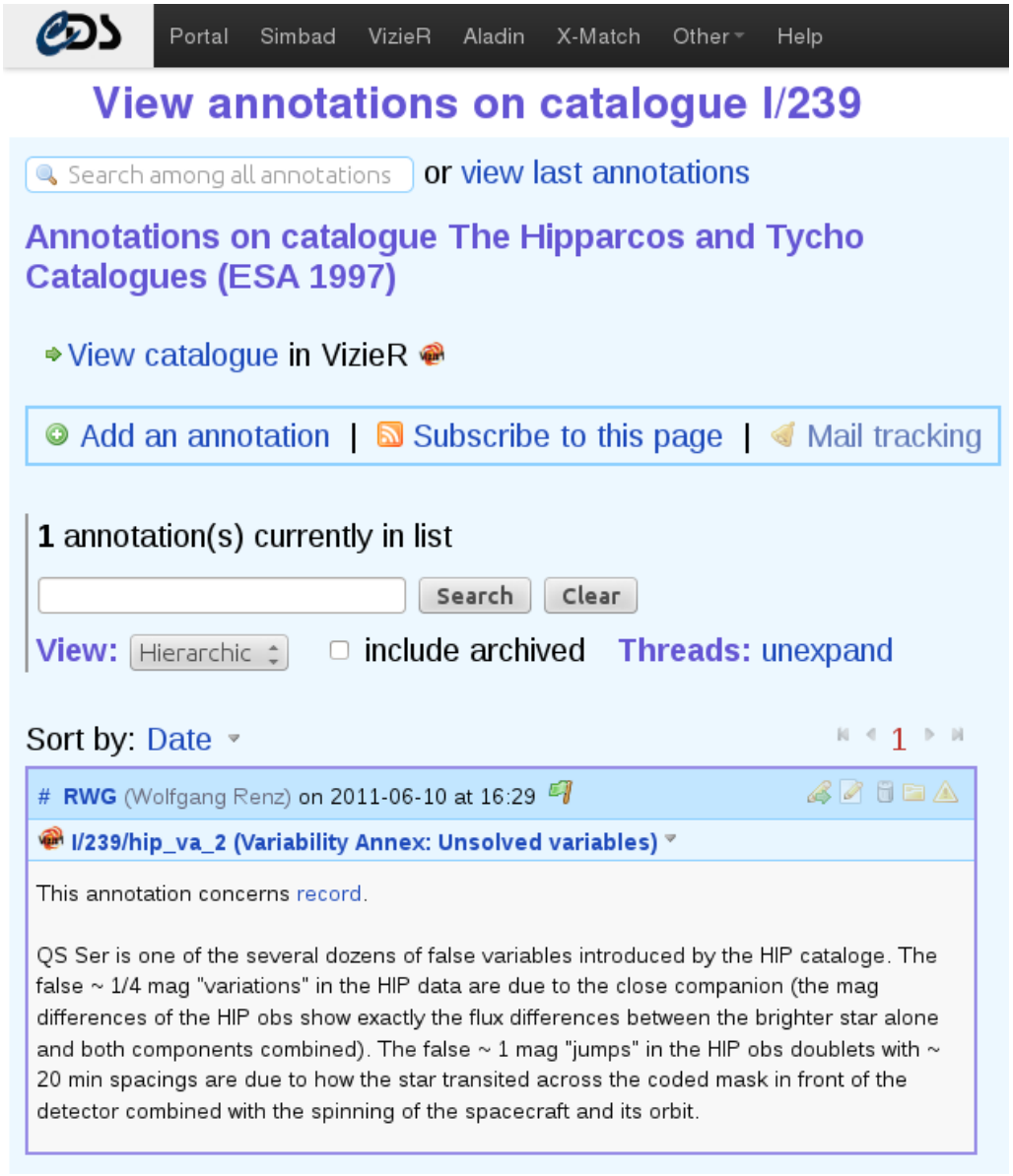


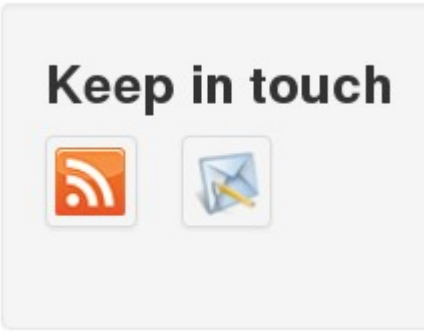
Infusion

difFUSION de la connaissance INformatique

External interactions with users (astronomers)

Feedback from users





External interactions with astronomers : questions to authors

Questions from VizieR (missing data, incoherences, or precisions needed)

- Table 8 (« data » version) always indicates "0.00" or blank values for the SSFR + SSFR errors measures...
- Table 16 contains the first 5 X-ray sources with optical counterpart but the table should contain information for the 32 sources of Figure 7...
- After treatment for SIMBAD, we noticed a discrepancy between coordinates in table 5 and coordinates in Figure 3 for 8 objets; can we correct the VizieR table?

Questions from COSIM (discrepancies or precisions needed)

- Half of the Lyman-break galaxies studied are, actually, stars...
- Table4, RA=23 51 44.69, DEC= 24 34 42.30: This object is a "confirmed member" and in the same time an "outlier"?
- Can you send me the full names of the QSOs/better coordinates because it's very difficult to retrieve the full names with QHHMM+DD and no redshift...

Conclusion

Symbiosis (from Ancient Greek σύν "together" and βίωσις "living") is a close and long-term interaction between two or more interdependent persons or groups.

The CDS success is based on a close and long-term interaction between :

- astronomers : specialists of the domain and data validation.

- computer engineers : create easy ways to ingest, retrieve and use the data.

- documentalists : data specialists (cross-identification with SIMBAD) ; mediators between astronomers and IT specialists.

Thank you very much Dr François OCHSENBEIN

APOD : Horsehead and Orion Nebulas - Image Credit & Copyright: Roberto Colombari & Federico Pelliccia