



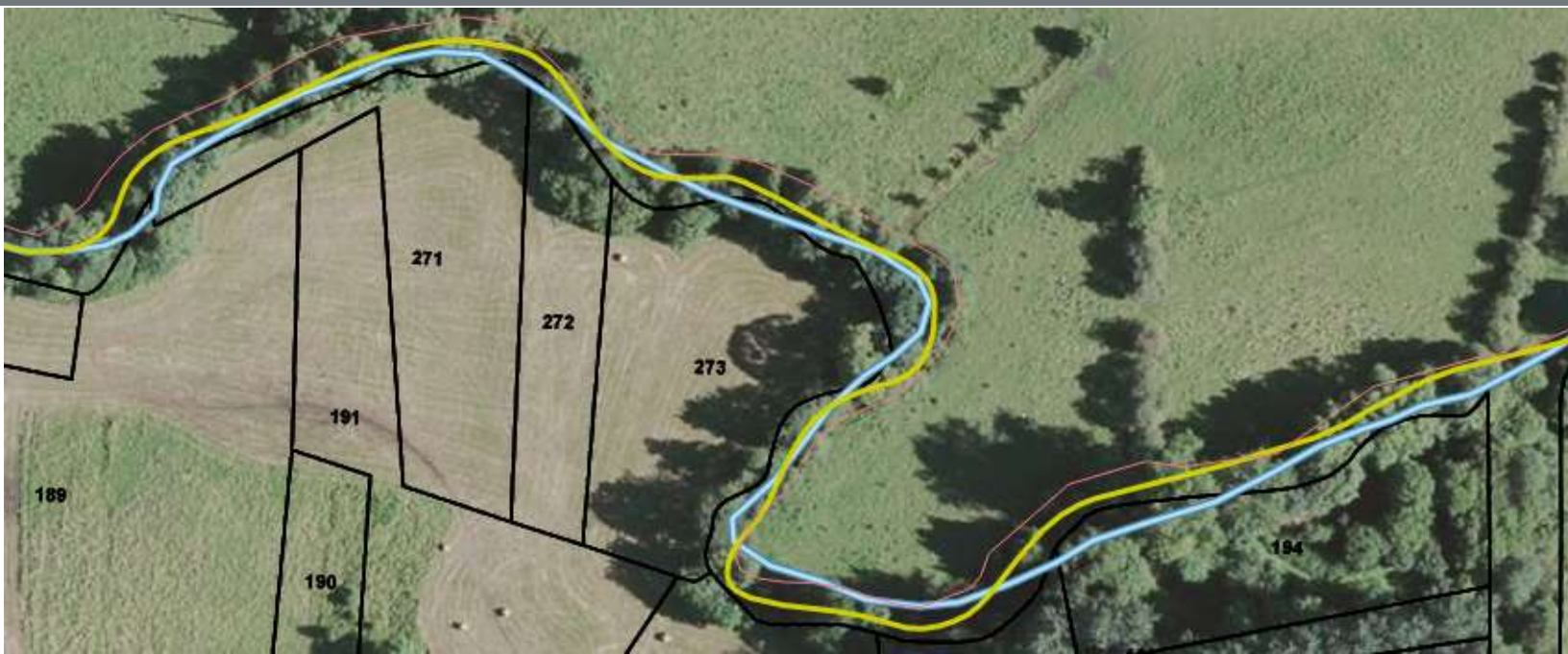
# TOWARDS FRENCH ELF EDGEMATCHINGS

*Bruxelles  
June 2016*

# THE NEW BOUNDARY LINE

## KINDS OF AGREEMENTS

### WAYS TO EDGEMATCH

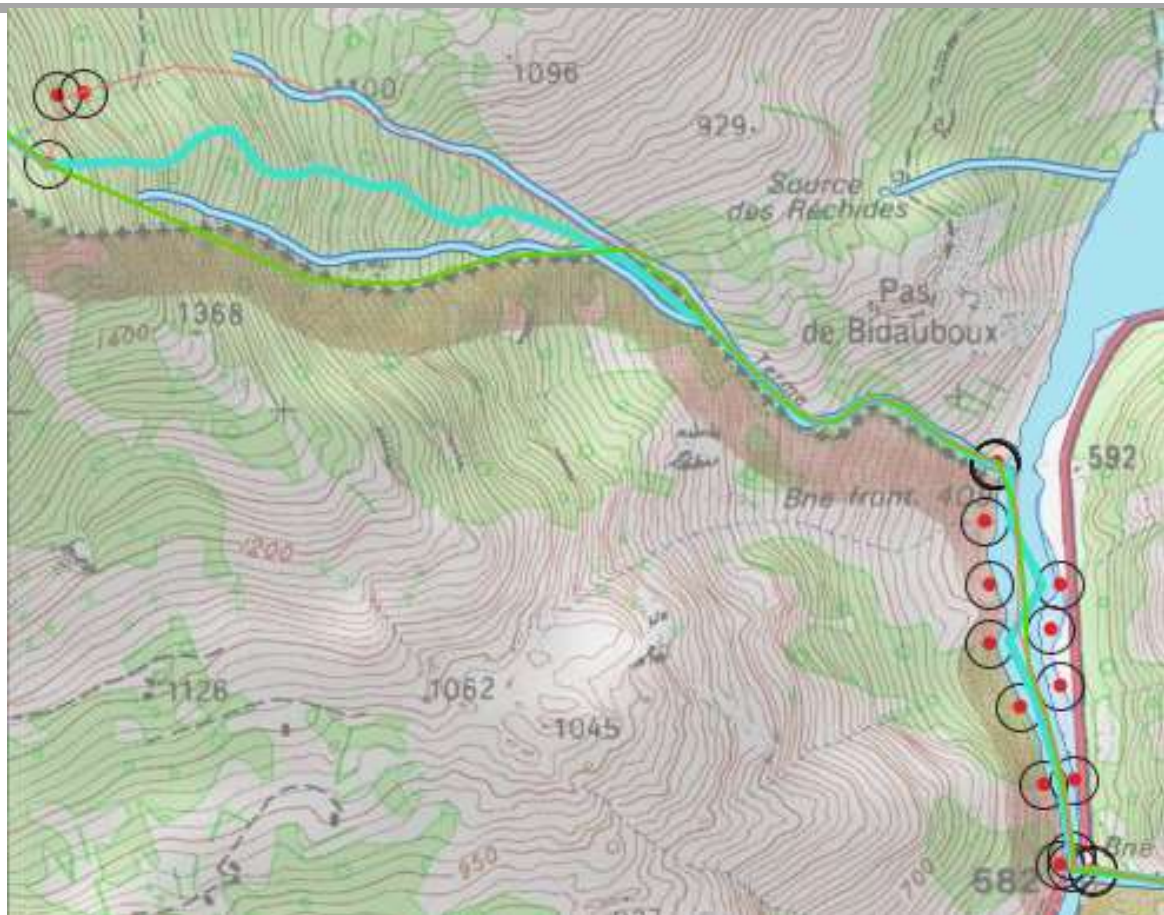


## SUPPORT: SHARED TECHNIQUE & COM

Line improved by

- Coordinates of marks
- Photogrammetry
- Lidar measures
- Georeferenced cadastre

**Shared recognition of technical quality criteria**

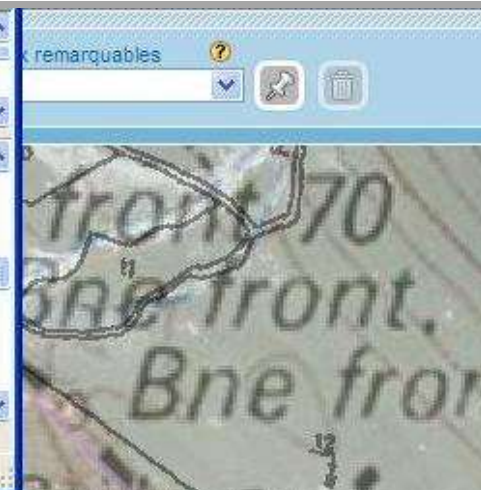


For access to all, the different lines at each step are displayed on Internet

<http://cnig.gouv.fr/apigeoportail/pageapi.php>

# BREAK : COST OF UNAVOIDABLE GNSS MESURES

A	B	C	D	E	F	G	H	I	J	K	L	M
Coverage	Numéro du point	Coordonnées et Type du point	Mesure GPS	Latitude	Longitude	Quota ellip. Hauteur ellips.	N	E	Quota geoidica Altitude	Y	X	Quota geoidica Altitude
Colle della Maddalena	65A	P/P	1999	44°25'23" 5772	6°54'27" 7707	2297,10	4921027,50	1333475,50	2242,70	246010,80	963795,70	2243,00
	66	I/G	2005	44°25'22" 6414	6°54'25" 3590	2293,90	4920999,99	1333421,43	2239,81	245979,00	963744,03	2239,76
	67	C/B	1999	44°25'13" 4495	6°54'10" 1868	2089,60	4920725,00	1333078,70	2035,20	245677,10	963424,70	2035,50
	68	P/P	1999	44°25'18" 7944	6°54'00" 1466	2071,00	4920895,60	1332860,90	2016,50	245829,50	963193,80	2016,80
	69	ND/NM		44°25'20" 2142	6°53'56" 9115		4920941,71	1332791,33		245869,32	963119,93	
	69(R)	C/B	1999	44°25'20" 1808	6°53'57" 0071	2055,40	4920940,20	1332792,60	2001,00	245868,40	963122,10	2001,30
	70	C/B	1999	44°25'18" 7688	6°53'54" 4221	2047,50	4920898,10	1332734,30	1993,10	245821,70	963067,40	1993,40
71	C/B	1999	44°25'15" 6218	6°53'51" 4066	2087,60	4920802,70	1332685,20	2033,10	245721,10	963006,20	2033,40	
Colle della Maddalena	72	C/B	1999	44°25'14" 8296	6°53'50" 6835	2090,30	4920778,60	1332648,50	2035,90	245695,80	962991,60	2036,10
	73	C/B	1999	44°25'15" 1662	6°53'34" 1794	2161,20	4920798,40	1332283,80	2106,80	245685,90	962626,50	2107,10
	74	P/P	1999	44°25'11" 4579	6°53'32" 9490	2165,60	4920684,70	1332253,70	2111,10	245570,20	962605,70	2111,40
	75	C/B	1999	44°25'05" 6039	6°53'34" 8883	2157,50	4920503,00	1332291,90	2103,10	245392,10	962658,50	2103,40



# NEW JURIDICAL ASPECTS

“...wherever the two states have adopted common limits and determinable by reference to the same system, demarcation is considered proved by reference to that system...”

## Official agreements and maintenance

Positions defended by France with foreign countries



Responsible in coordination and maintenance of the border work, he manages funds

## Others

When the best expertise is from cadastre



IGN

Cartographic or geodetic expertise



Local expertise

# FRANCE-SPAIN COMMISSION PROPOSAL

MAXIMUM PLAN AGREEMENT ( PLAN A) 1 double boundary line on water	PLAN MINIMUM PLAN B (or C) 6 double bordelines areas (or 72)
<b>ADVANTAGES</b>	
Interoperable line for all boundary data.	Move forward a compromise on sound bases, with minimal risk of being challenged in the future.
To solve ancient conflicts, take advantage of the Directive . Advanced compromise can anticipate future problems of definition of the boundary, which will increase with the years (and the costs )...	Validation will be accepted without bad effects by most of the stakeholders.
<b>DISADVANTAGES</b>	
It is more difficult to change an existing line than to define a new, not yet resolved	Users of GI do not understand that national datasets are not consistent at boundaries
	A conflict zone loses its economic potential







# THE NEW BOUNDARY LINE

## KINDS OF AGREEMENTS

### WAYS TO EDGEMATCH

2016

2018

-  ELF Half-shared line
-  Temporary agreed line
-  One proposal agreed by the neighbour
-  Agreements with shared parts
-  Juridical validation process
-  Diplomatic lock

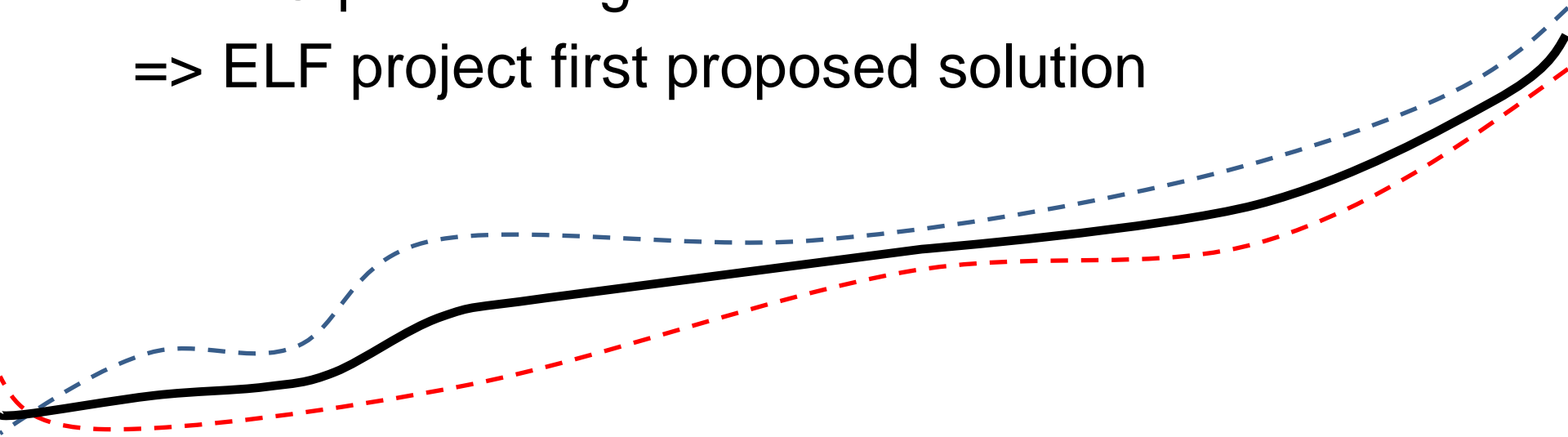
## WAYS TO GET AN UNIQUE LINE

### Half-shared



- Creation of a half-shared line from 2 lines by BKG processing

=> ELF project first proposed solution





## WAYS TO GET AN UNIQUE LINE

- One proposal agreed by the neighbour



- Contact and data Exchange

- No Technical differences

- One side accept the foreign line

=> Line waiting for an official bilateral validation

## WAYS TO GET AN UNIQUE LINE

### Agreements with shared parts



- Contact and data Exchange
- Technical differences ?
- What kind of edge match?

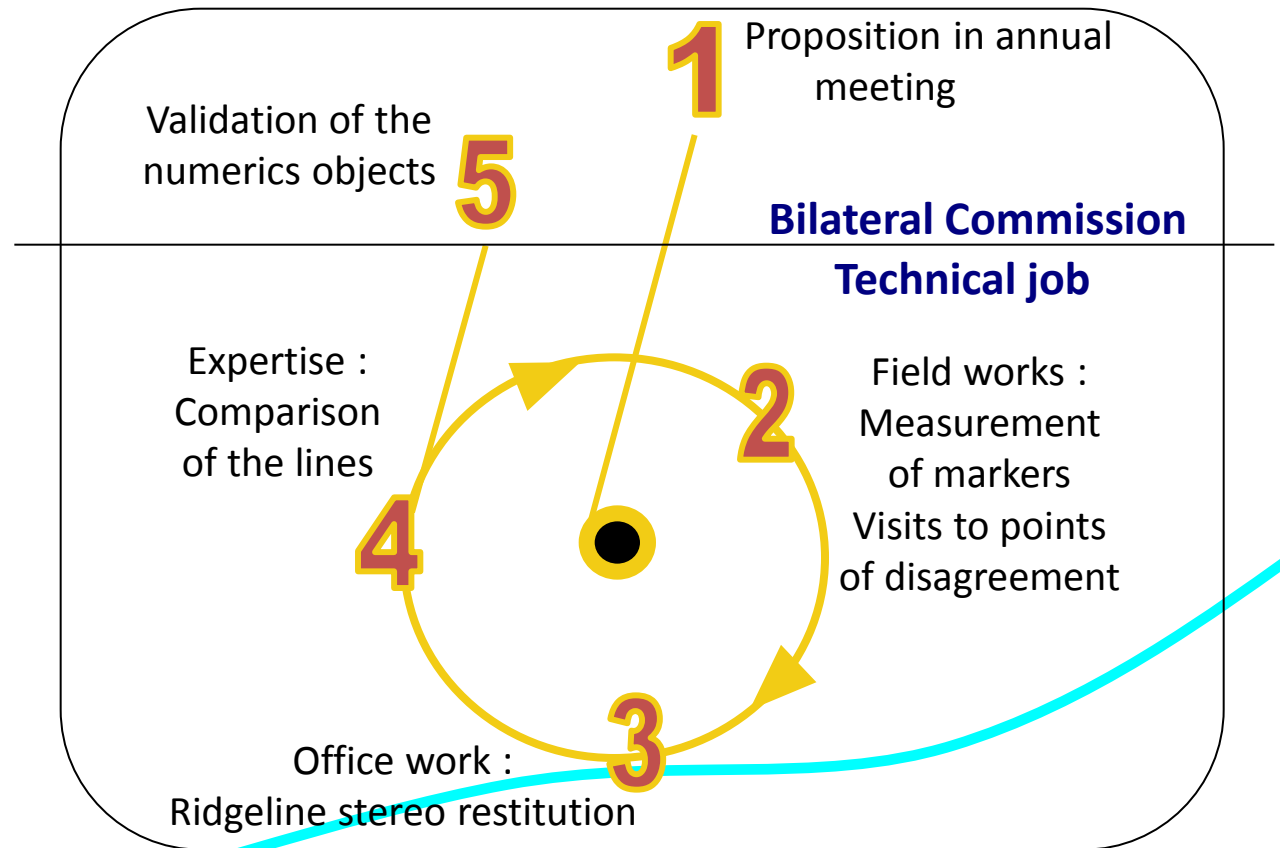
=> Line waiting for an official bilateral validation

# WAYS TO GET AN UNIQUE LINE

## Juridical validation in CMA



Validation  
process  
(can be long)



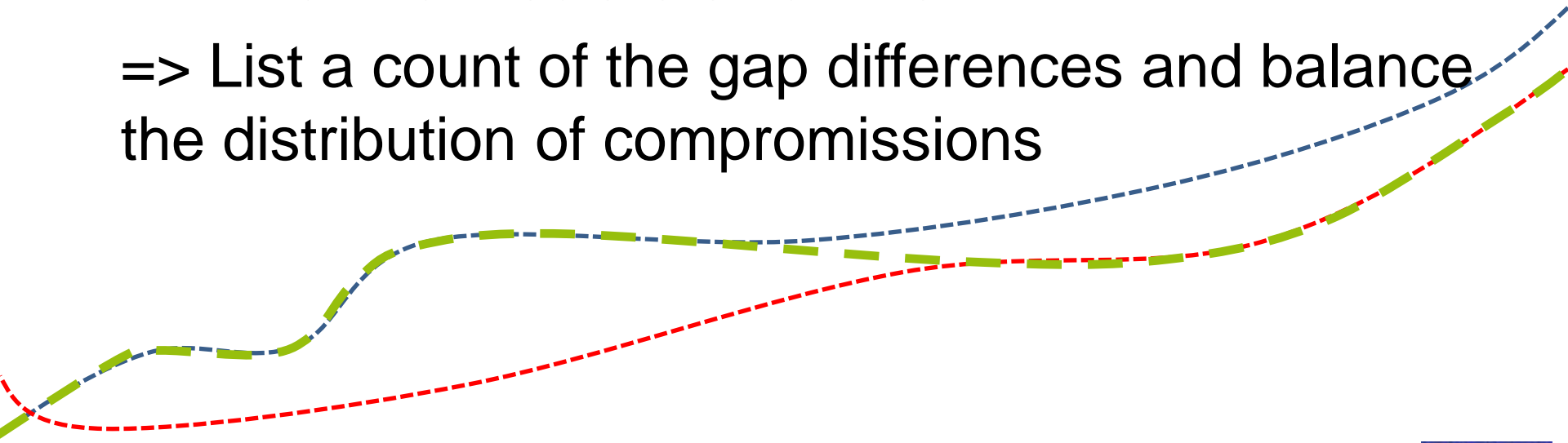
## WAYS TO GET AN UNIQUE LINE

### Temporary validation



- Agreement with future actions planned
- Quick and temporary
- Avoid intermediate solutions

=> List a count of the gap differences and balance the distribution of commissions



## WAYS TO GET AN UNIQUE LINE

### Disagreement



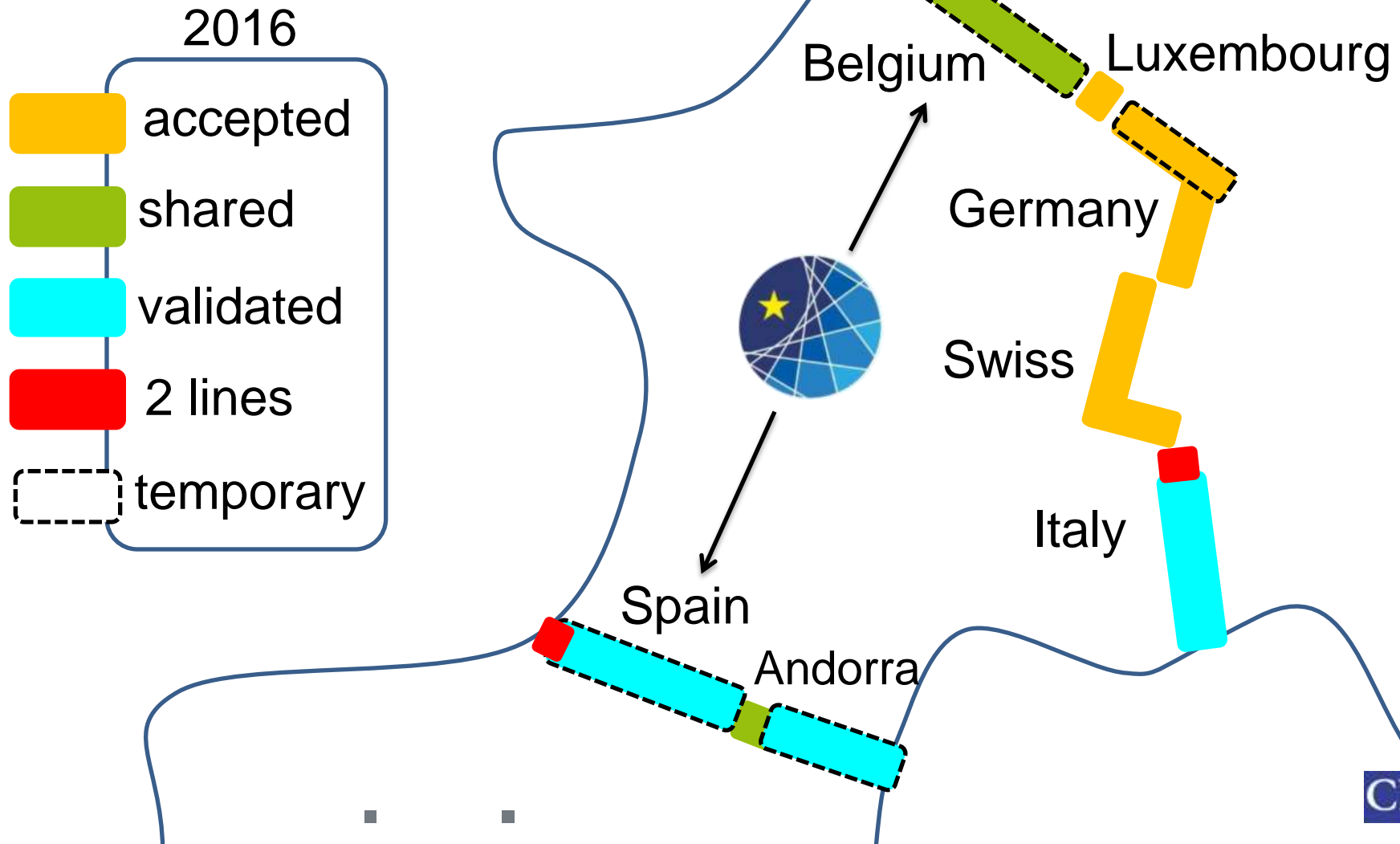
- To be treated at a politic level
  - must stay out of negotiations
  - 2 lines on such sector
- => future uncontrolled area?



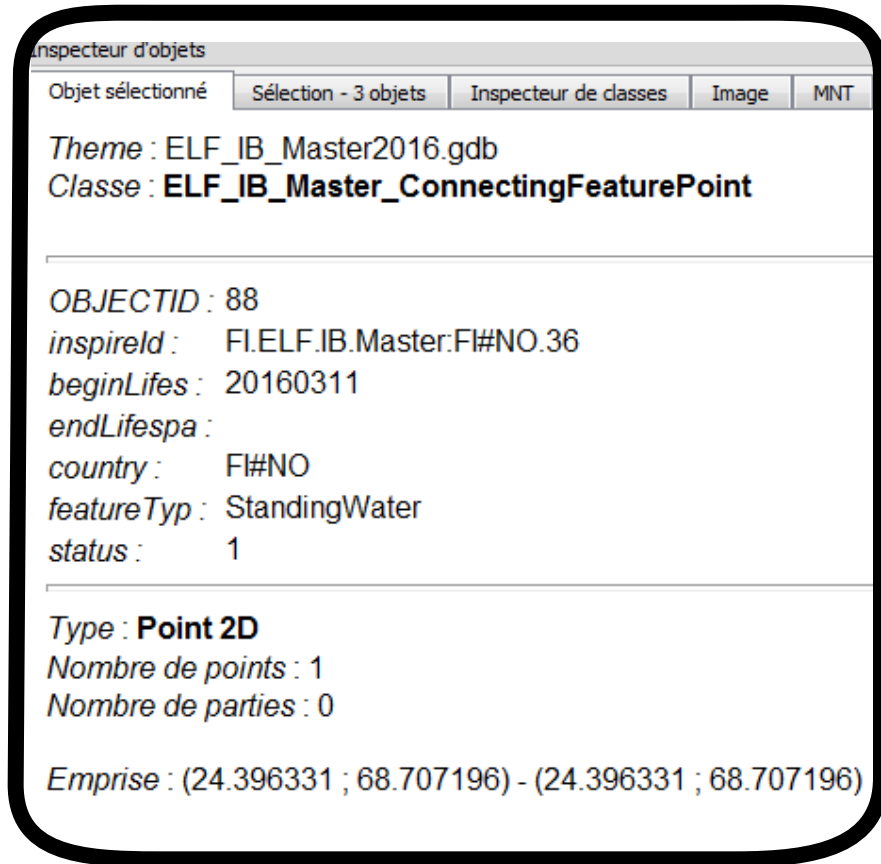
**THE NEW BOUNDARY LINE  
KINDS OF AGREEMENTS  
WAYS TO EDGEMATCH**

- 
-

# 2016 : 2 EDGEMATCHINGS PROCESS ON COURSE (BEL, ESP)



# 2016 ELF EDGEMATCHINGS



**Format exchange : shape**

**4 themes concerned**

- UA, TN, HY, BU

**CFs : 2 kinds of objects**

- Points (TN, HY)

- Line (UA, TN, HY, BU)

**CFs Elements**

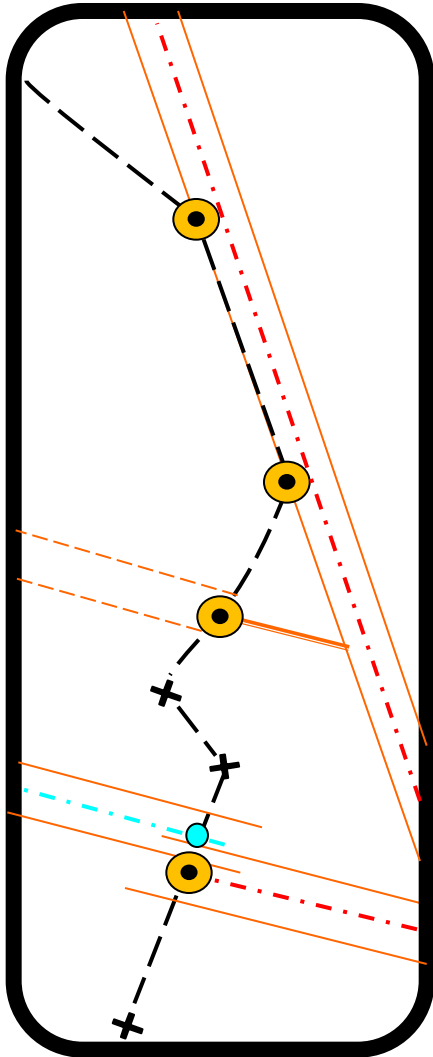
- Feature type

- ETRS89

Geodetic coordinates



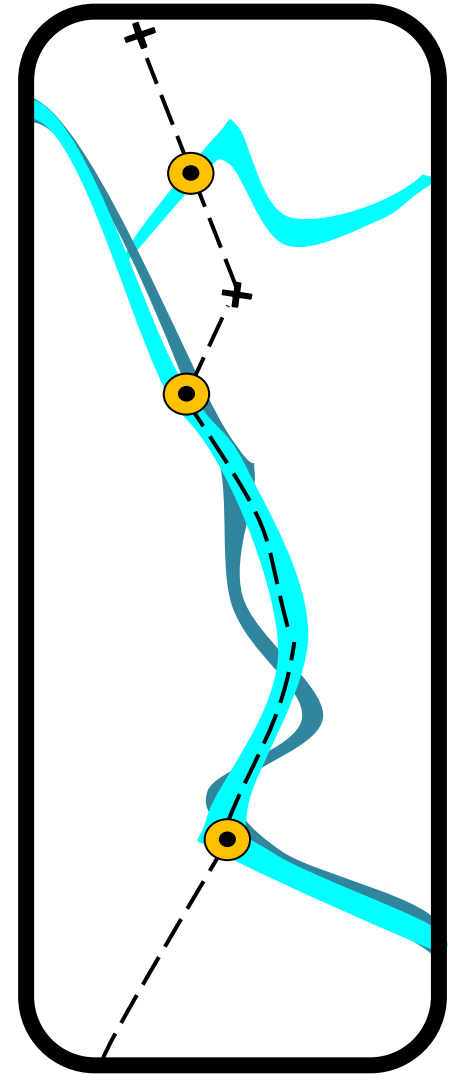
# EDGEMATCHING : CONNECTING POINTS



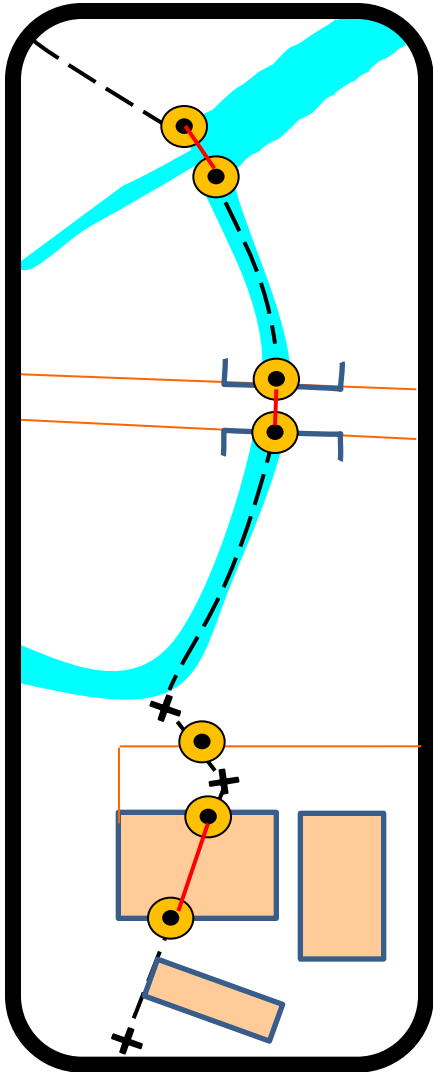
**Axes must not be braided**

2 ways :

- Adopt 1 unic line  
(a process of improvment  
has to be foreseen)
- Remove the candidate CF  
along the line (?)



# EDGEMATCHING : CFs CANDIDATES & LINES



Lines :

River polygons

Bridges

Customs shared houses

Private houses

CFs Candidates :

With Belgium (620 km)

TN : 1500 CFs

HY : 1500 CFs

BU : 15 buildings + 75 bridges

With Spain (623 km)

TN : 1000 CFs (?)

HY : 100 CFs (?)

BU : 0 + 20 bridges (?)

*Questions?...*

