

# Data quality management at Genavir

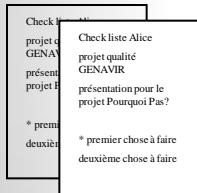


# Quality approach at GENAVIR: Data acquisition

*from creation ...* *It's a control of the data* *... to the data bank*



*before acquisition*



***ALICE:***  
Checklist before starting cruise

*During acquisition*

***QUARTAO:***  
Computer aided Watch

*Post acquisition*

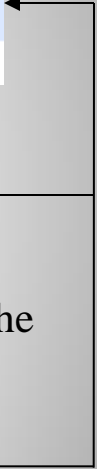


***TINARS:***  
validation software of the measure



***TRINAV:***  
interactive processing of navigation

***MADIDA:***  
Documentation and Data base



# *ALICE*



Assistance for the checklist of equipments

# ALICE

*Access database specific to each ship  
for officers in charge of electronics*

Checklist

## objectives:

\* Consistent checks on the sensors  
before acquisition

Independent control of the operator

\* Monitoring controls

Centralizing of controls  
(MADIDA)

On  
board

ashore

## means:

\* Propose a list of tests based on sensors  
selected (tests on the sensors and the links  
between sensors )

\* Saves the validation tests (OK, down,  
partial)

\* Can define a state audit Sensor Scientific  
and navigation sensor



Traitements de la mission : 'TrTOUFD' - MODE : 'DÉBUT MISSION'

Equipements - Actions    Etats des équipements

Equipements liés au bateau		Equipements Mobiles	
Categorie	Type	Modèle	Etat
Informatique	Système d' Acquisition de Mesures	at-termes	Yellow
Informatique	Système d' Acquisition de Mesures	at-citep	Green
Informatique	Système d' Archivage	at-archivr	Green
Informatique	Système de Navigation Intégrée	at-cinnap	Green
Informatique	Système de Quart assisté par Ord	at-quartao	Green
Informatique	Système de Visualisation	at-vidosc	Green
Navigation	GPS différentiel	NR 103	Green
Navigation	GPS différentiel	NR 203	Green
Navigation	Gyrocompas "pas relative"	SGB 1000	Green
Navigation	Gyrocompas "scientifique"	SGB 1000	Green
Navigation	Loch Doppler	TSM 5750	Green
Navigation	Loch électromagnétique	CLI 60	Green
Navigation	Radar bande S (12cm)	Atlas 8600 ARPA	Green
Navigation	Radar bande X (3cm)	Atlas 5600 AC/TM	Green
Navigation	Sondeur de navigation	SKIPPER ED 161 50kHz	Green
Scientifique	Attitude : Centrale		Green
Scientifique	Célérimètre de coque	SVP 10	Green
Scientifique	Gravimètre	BGM 5	Green
Scientifique	Gravimètre	KSS 30	Green
Scientifique	Heure : Centrale	SOFY M90 EXP 320	Green
Scientifique	Heure : Centrale	vV 4066	Green
Scientifique	Météo : centrale	BATOS	Green
Scientifique	Météo : centrale vent	Mors - Suber	Green
Scientifique	Météo : centrale vent	vVAD 13	Green
Scientifique	Sondeur multifaisceaux	EM 12 Dual	Green
Scientifique	Thermomètre Platine Precision	TPP	Red
Scientifique	Thermomètre Platine Precision	TPP	Green

Nombre d'équipements listés : 31

Catégorie : **Informatique**    Rechange     Détails

Type : **Système d' Acquisition de Mesures "scientifique"**

Modèle : **at-termes**

N/S : **524T2163**

Liste des équipements liés associés :

Categorie	Type	Modèle	Type	Etat
Informatique	Réseau Multi-Services	MultiSwitch 900		Green
Informatique	Système d' Acquisition de Mesures	at-citep		Green
Informatique	Système d' Archivage	at-archivr		Green
Informatique	Système de Navigation Intégrée	at-cinnap		Green
Scientifique	Gravimètre	BGM 5		Green
Scientifique	Gravimètre	KSS 30		Green
Scientifique	Heure : Centrale	SOFY M90 EXP 320		Green
Scientifique	Heure : Centrale	vV 4066		Green
Scientifique	Météo : centrale	BATOS		Green
Scientifique	Météo : centrale vent	Mors - Suber		Green
Scientifique	Thermomètre Platine Precision	TPP		Red
Scientifique	Thermomètre Platine Precision	TPP		Green
Scientifique	Thermosalinomètre	SBE 21		Green

Nombre d'équipements liés : 13

Catégorie :

Type :

Modèle :

N/S :     Rechange     Détails

Formulaire

NUM

# QUARTAO



Computer aided WATCH



# QUARTAO

## Objectives

Computer aided  
watch

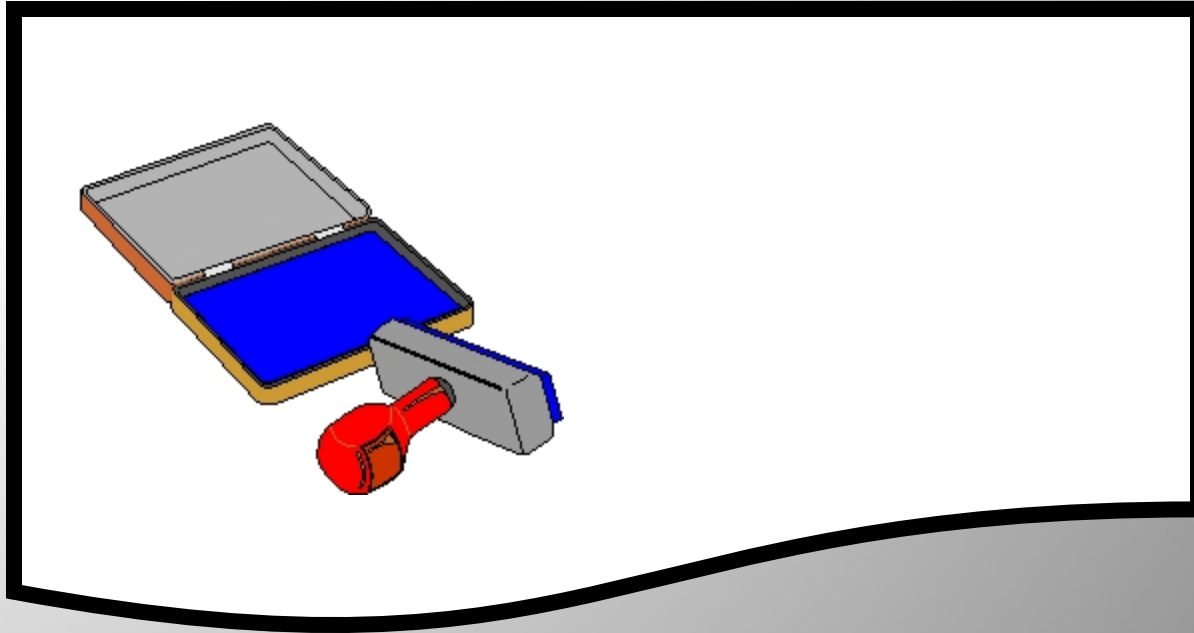
- Centralize and visualize data from sensors relying on information circulating on the network (ex. via TECHSAS)
- Alert users when a problem occurs
- Helping watch people to identify malfunctions
- Keep track of alarms :
  - logbook*
  - onshore processing (MADIDA)*
- 2 types of users
  - *Technician of the watch : in charge of supervision*
  - *Electronics Officer : responsible for setting*







# *TINARS*



Intermediate processing before  
storage

# TINARS

Final assessment

## Objectives

- Technically validate data :
  - Assigning a quality flag
  - Publishing a report record
- Correct positioning and timing
- Does not extend to scientific processing:
  - check the calibration, the parameters of acquisition
  - verification of the presence or absence of the measure
  - trivial thresholds on data

0: unskilled

1: good

2: out of statistics

3: doubtful

4: false

9: missing

# TINARS Progress

Final assessment

## Three processing steps

### 1<sup>st</sup> step

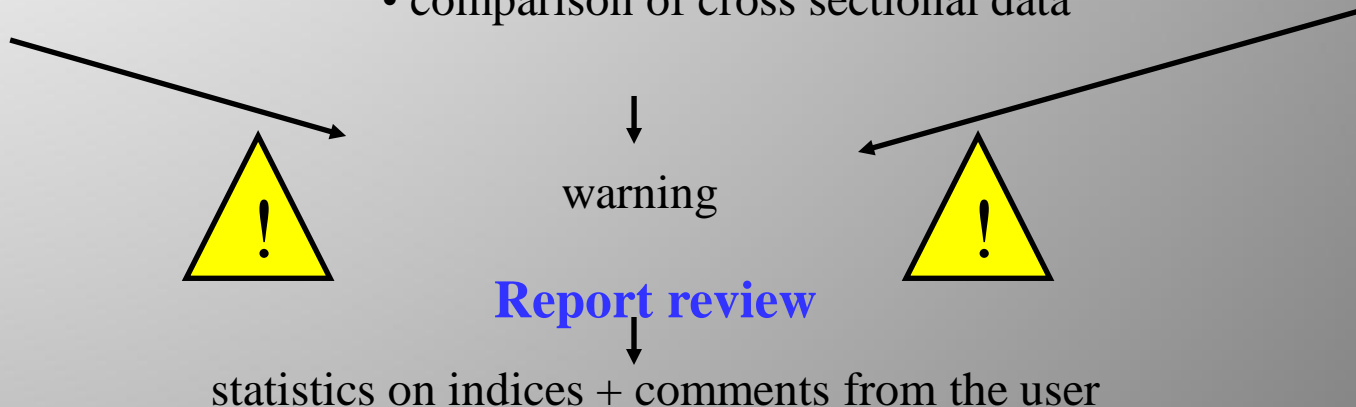
- reading data individually
- automatic subscribing (threshold, equality, presence, absence)

### 2<sup>nd</sup> step

- check rates of acquisition
- check of navigation
- check calculations of computer software acquisition (if possible)
- comparison of cross sectional data

### 3<sup>rd</sup> step

- impact indices



# TINARS

## Sample record : A.D.C.P

Final assessment

### Operator's comments about processing

**Data file :**

Raw file :

- There are several breaks in the time passes midnight . The day passes to the next day at 23h59'57" .
- The amplitude of the beam 2 is slightly lower than that of other beams . This did not affect the range .

### Step 3

**Statistics - file 002**

Indice	0	1	2	3	4	9
Vel1:	0,00%	71,61%	0,00%	0,00%	0,00%	28,39%
Vel2 :	0,00%	72,95%	0,00%	0,00%	0,00%	27,05%
Vel3 :	0,00%	72,47%	0,00%	0,00%	0,00%	27,53%
Vel4:	0,00%	70,90%	0,00%	0,00%	0,00%	29,10%



## MADIDA

Documentation and Data Base on  
sensors, acquisition conditions...

<https://www.genavir.fr/madida>

# Quality Approach at GENAVIR

*It is a verification of the data*

*since its creation ...*

*... to its archiving*



*Intermediate processing before archiving at SISMER*

ALICE

*Provide technically validated data*

QUARTAO

*Indexed data technical archive*

DINES

*Save technical information, raw data*

*Archiving not sustainable better understanding of the extent*

TINARS

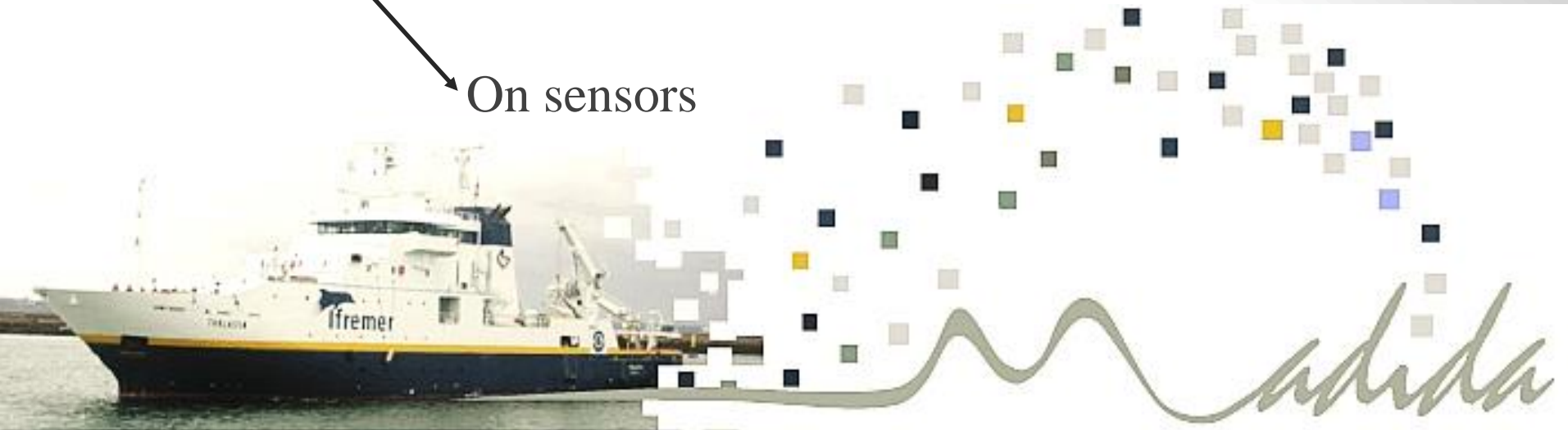
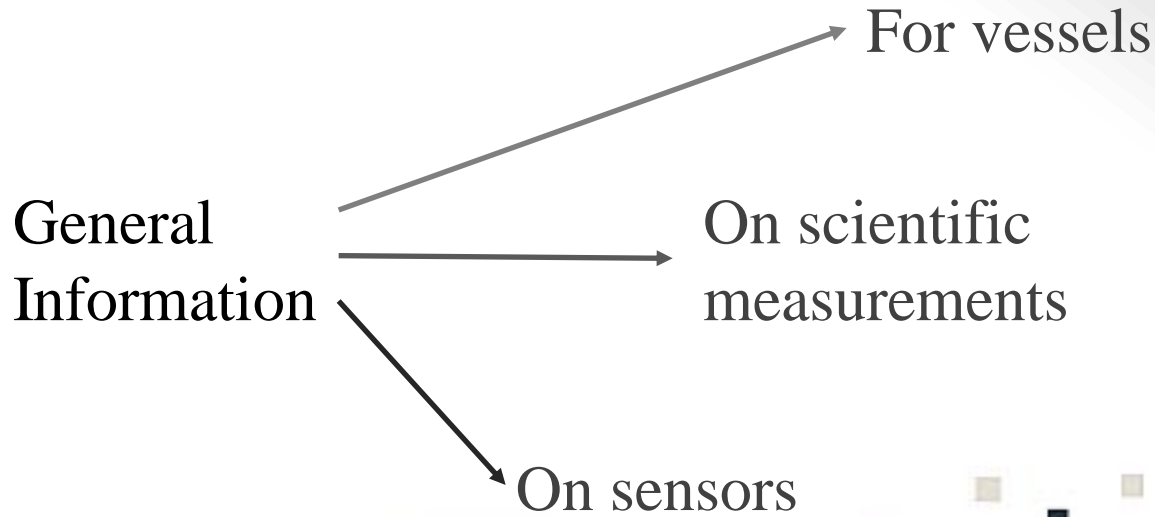


ARTECH





## Information available in MADIDA



<https://www.genavir.fr/madida>

Thank you

<https://www.genavir.fr/madida>