

# SCAN method



## First step to a risk management tool

DGMT/DAM/SM4  
DDE29/SMIB/SPBF



IALA/EEP 11  
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# PLAN

- I. What is SCAN?
- II. Ranking method
- III. User Priority Degree
- IV. Examples
- V. Feedback



La Rochelle

# What is SCAN?

It is the

« Combined Scheme for Aids to Navigation »  
(SCAN in French)



# The schemes

**A scheme is defined by:**

- A navigation area

*(High sea Coastal, local,...)*

- A type of route

*(Transit, Approach, Cutting across, evolution,...)*

# Ranking method

- First step
  - Identify the SCANs
- Second step
  - *Assign Atons for each SCAN*
- Third step
  - *Define a User priority degree*



# User priority degree

- For each scheme, a User Priority Degree is assigned to all the AtoNs
- It reflects the significance of the AtoN considering the Scheme and the other AtoNs the user can rely on simultaneously

# User priority degree

- There is Four degrees:
  - Universal Aid (AU)
  - Principal Aid (AP)
  - Secondary Aid (AS)
  - Additional Aid (AD)

# Universal Aid

- the User can rely on it because it offers him a precise position without ambiguity, during a long time, if possible independantly to the weather conditions

→ **Radionav Aids**



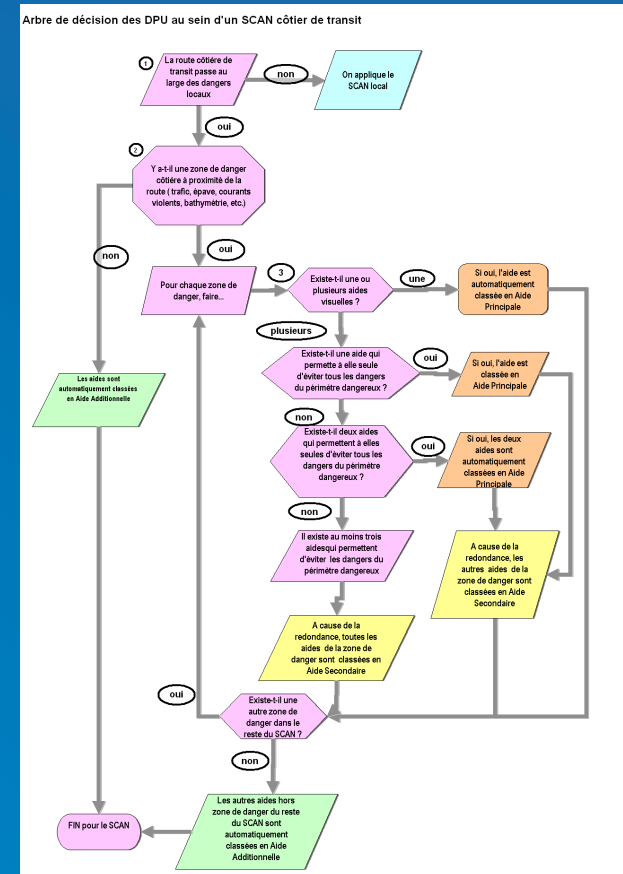


# Other degrees

- If the User can only rely on **one or two** Aids they are **principal Aids**
- If the User can rely on three or more aids
  - If there is a danger  
→ **Secondary Aid**
  - If there is no danger  
→ **Additional Aid**

# User priority degree / rules

- Mutualisation is studied night and day, the DPU is the worst case
- Decision trees provide guidance to affect the right degree to each Aid

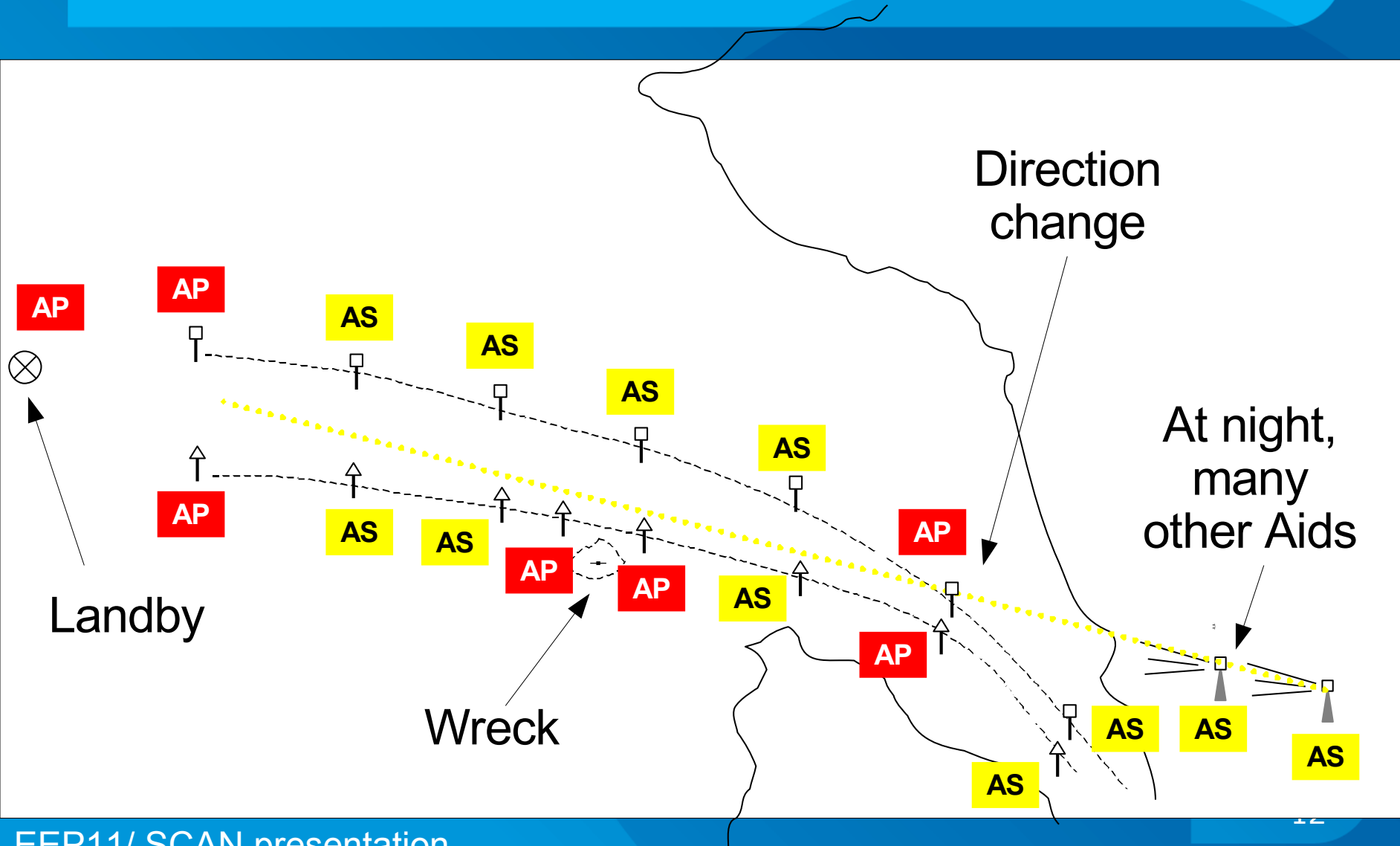


# User priority degree / rules

- Landby buoys:  
Principal Aids
- Port entry lights:  
Principal Aids
- Dike, pier lights  
Principal Aids (danger)
- Wharf lights:  
Additional Aids



# User priority degree / examples



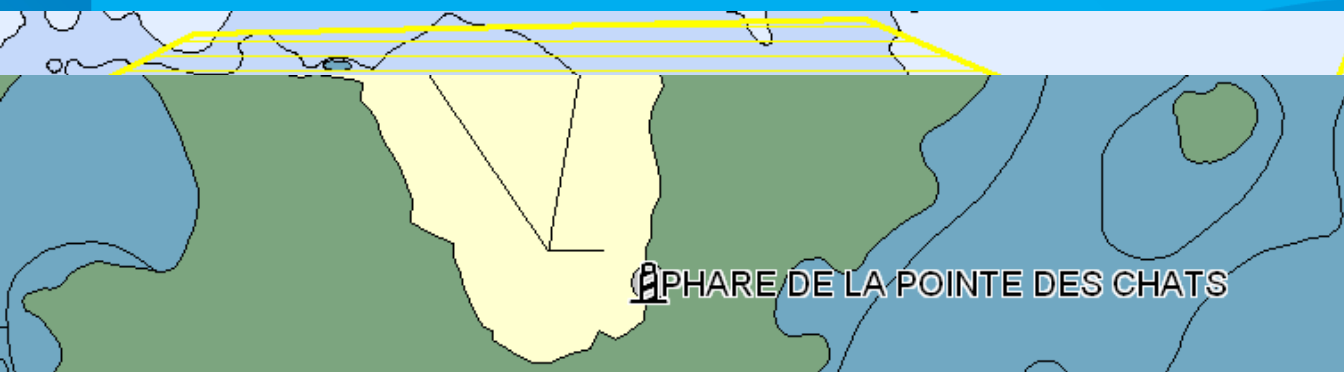


# User priority degree / example





# User priority degree / example





# Additional information

- The tallest AtoNs are not necessarily the most important ones
- One Aid can be included into several Schemes
  - several degrees
- For each scheme, for each type of traffic (passengers, commercial, fishing, sailing,) a level of this traffic ( low, average or high) has been chosen

# Feedback

- The SCAN approach has been done for all the continental French AtoNs (more than 6000)
- It took more than two years work to do it in full-time equivalent
- A mariner was present during the whole process to guarantee the homogeneity

# Feedback/ Prospects

- The SCAN do not give a direct link with the availability as defined in the navguide
- The relative importance of the different Schemes must be given
- The level of trafic must be quantified with objective indicators
- It needs to be updated

# Feedback/ Uses

- It is a powerful tool to make decisions in a constraint environment
- It helps to change our point of view on our AtoNs

# Feedback

Is the SCAN the only criterion that  
deserve to be taken into  
account?

# Feedback



Of course not, there is also the  
historical point of view, for instance



# Conclusion

- The SCAN is a method that allows to classify the AtoNs according their User Priority Degree in different schemes
- With this method, comparisons can be useful for AtoNs design and maintenance policy

# Thank you for your attention!

