

Vmstools Reference Card

by Niels T. Hintzen, IMARES, part of Wageningen UR, niels.hintzen@wur.nl
2010-08-31. See also: <http://code.google.com/p/vmstools/>

Data

data(eflalo2) load eflalo2 test dataset
data(tacsat) load the tacsat test dataset
data(harbours) load the harbour test dataset
data(VMShf) load the VMS high ping rate test dataset
data(VMS) load the VMS test dataset

Metièr definitions

Classif()
Fonctions()

Tacsat Behavior Analyses

filterVMS(tacsat) filter out records that do not lay within a speed range
and/or change of heading interval
pointInHarbour(tacsat) flags tacsat points that are positioned in a
harbour

Link eflalo2 - tacsat

merge.vms.to.logbook.at.the.ping.scale
(eflalo2,tacsatplus,general,vesselid) Merge eflalo2 and
tacsat+ on tacsat ping level
mergeEflalo2Tacsat(eflalo2,tacsat) Merge eflalo2 and tacsat at
trip level

Interpolate tacsat

interpolateVMS(tacsat, interval, margin, res, method, parameters, headingAdjustment) interpolate tacsat data between pings x
minutes apart using straight line or cubic Hermite spline
interpolation
calculateCI(longitudes, latitudes, interpolations, index
Interpolation, tacsat, grid, spatialDataFrame, singleInterpolation, indexTacsat, parameters) calculate a confidence
interval around the interpolation
diffInter(interpolation, tacsatHighRes) calculate difference
between true high-resolution data and interpolated dataset
distanceInterpolation(interpolation) calculate length of
interpolation
distanceVMS(tacsat, index) calculate distance between gps
coordinates of a complete VMS dataset

Plotting

createGrid(xrange, yrange, resx, resy) create spatial grid
mapGrid()
vmsGridCreate()

Converting

bearing(lon1, lat1, lon2, lat2) calculate bearing from tacsat
longitude and latitude data
degree2Km(lon, lat, degree) convert degrees to kilometers, only in
longitudinal direction
distance(lon1, lat1, lon2, lat2) calculate distance between two
gps coordinates

km2Degree(lon, lat, km) convert kilometers to degrees, only in
longitudinal direction
lonLatRatio(lon, lat) compute the ratio between distance in longitude
and latitude
ICESrectangle(tacsat) calculate ICES rectangle from gps location