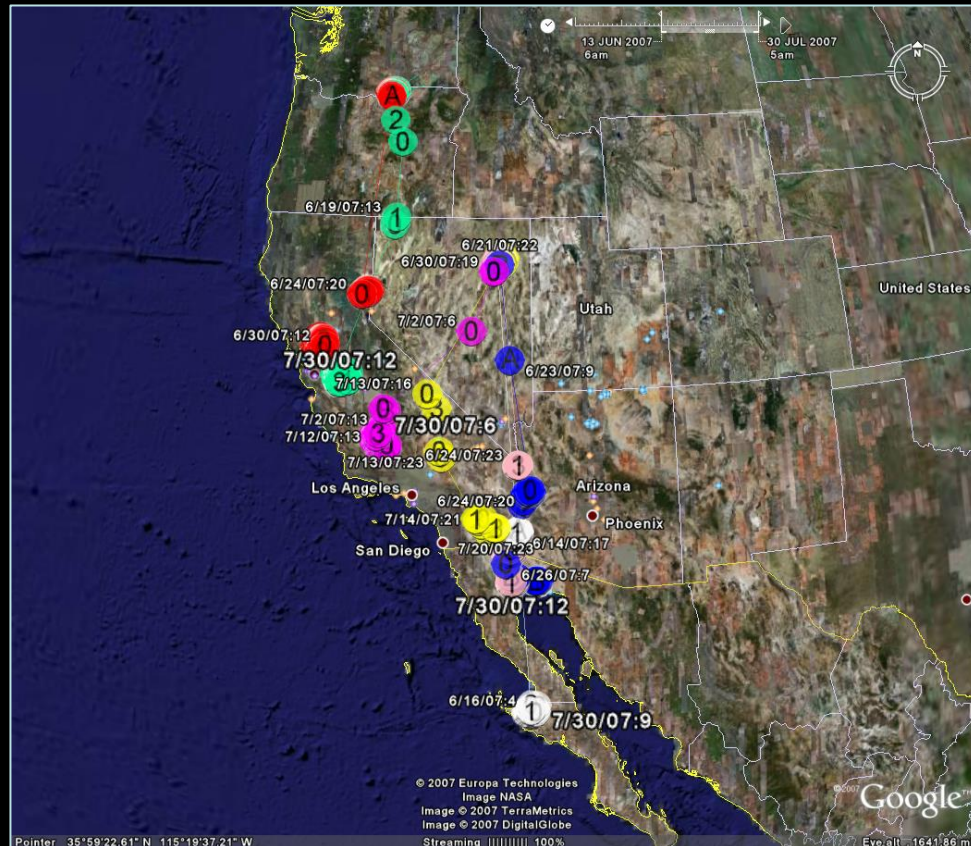


PTT Data Management/Parsing/Filtering



Accessing Argos Data

- ArgosWeb (www.argos-system.org)
 - Secure website
 - View data in map form
 - Download data

All

All
 by ID numb. (s)
 by name(s)
 by type(s)
 by model(s)
 by program(s)
 by WMO ID numb. (s)

By default, observations are distributed in the following way:

1. by program
2. by ID number
3. by date and observation time
4. by level (in meters) of the physical measurement

Data - 34 items									
	Platform ID No.	Platform type	Obs. Date	Latitude	Longitude	Loc. date	Level	ATMPRES	SEATEMP
☒	69005	DRIFTER	2008/07/27 03:40:00	10° 58' 45"N	65° 52' 29"W	2008/07/27 01:25:42	0	1013.1	26.23
☒	69005	DRIFTER	2008/07/27 04:40:00	10° 58' 45"N	65° 52' 29"W	2008/07/27 01:25:42	0	1012.9	26.149
☒	69005	DRIFTER	2008/07/27 05:40:00	11° 22' 13"N	65° 21' 19"W	2008/07/27 09:40:36	0	1012.5	26.969
☒	69005	DRIFTER	2008/07/27 06:40:00	11° 22' 13"N	65° 21' 19"W	2008/07/27 09:40:36	0	1012.3	26.069
☒	69005	DRIFTER	2008/07/27 07:40:00	11° 22' 13"N	65° 21' 19"W	2008/07/27 09:40:36	0	1012.3	26.23
☒	69005	DRIFTER	2008/07/27 08:40:00	11° 22' 13"N	65° 21' 19"W	2008/07/27 09:40:36	0	1012.5	26.31
☒	69005	DRIFTER	2008/07/27 09:40:00	11° 22' 13"N	65° 21' 19"W	2008/07/27 09:40:36	0	1013.1	26.39
☒	69005	DRIFTER	2008/07/27 10:40:00	11° 22' 58"N	65° 17' 59"W	2008/07/27 10:03:39	0	1013.2	26.39
☒	69005	DRIFTER	2008/07/27 11:40:00	11° 22' 58"N	65° 17' 59"W	2008/07/27 10:03:39	0	1013.7	26.47

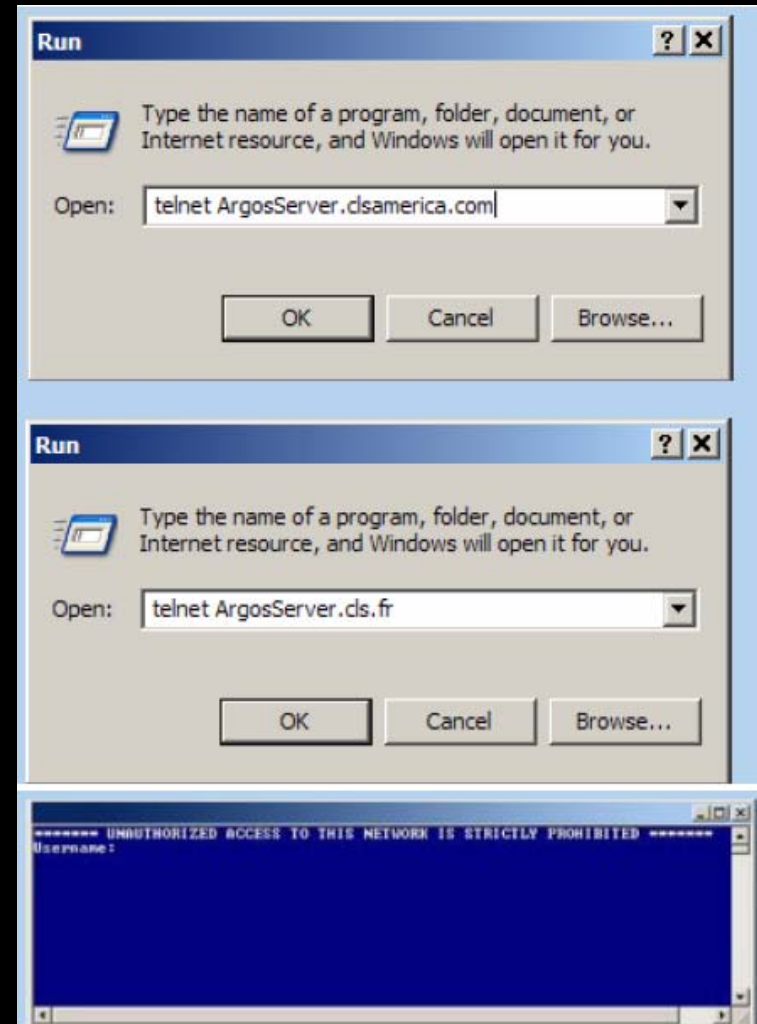
Accessing Argos Data

- ArgosWeb (www.argos-system.org)
 - Secure website
 - View data in map form
 - Download data



Accessing Argos Data

- ArgosWeb
 - Secure website
 - View data in map form
 - Download data
- ArgosServer (TELNET)



Accessing Argos Data

- ArgosWeb
 - Secure website
 - View data in map form
 - Download data
- ArgosServer (TELNET)
- ArgosDirect
 - Data sent to users via email, FTP, CD-ROM

ArgosDirect

Program Number

PTT ID

Date/Time

Location Class

CLS AMERICA / Automatic Distribution Service

ads@datadist.argosinc.com

Sent: Fri 6/30/2006 8:02 AM

To: chartman@unr.nevada.edu

Prog 03256

65549 Date : 30.06.06 10:11:07 LC : 1 IQ : 60

Lat1 : 37.164N Lon1 : 120.987W Lat2 : 36.806N Lon2 : 119.254W Nb mes : 008

Nb mes>-120dB : 000 Best level : -124 dB Pass duration : 540s NOPC : 2

Calcul freq : 401 651760.3 Hz Altitude : 0 m 00 02 138 136

65550 Date : 29.06.06 20:05:44 LC : 1 IQ : 50

Lat1 : 31.692N Lon1 : 116.640W Lat2 : 38.041N Lon2 : 86.160W Nb mes : 005 Nb

mes>-120dB : 000 Best level : -131 dB Pass duration : 360s NOPC : 3 Calcul

freq : 401 651877.0 Hz Altitude : 216 m
01 28 18 15

65550 Date : 29.06.06 21:46:19 LC : 3 IQ : 58

Lat1 : 31.727N Lon1 : 116.676W Lat2 : 0.500N Lon2 : 0.525W Nb mes : 010 Nb

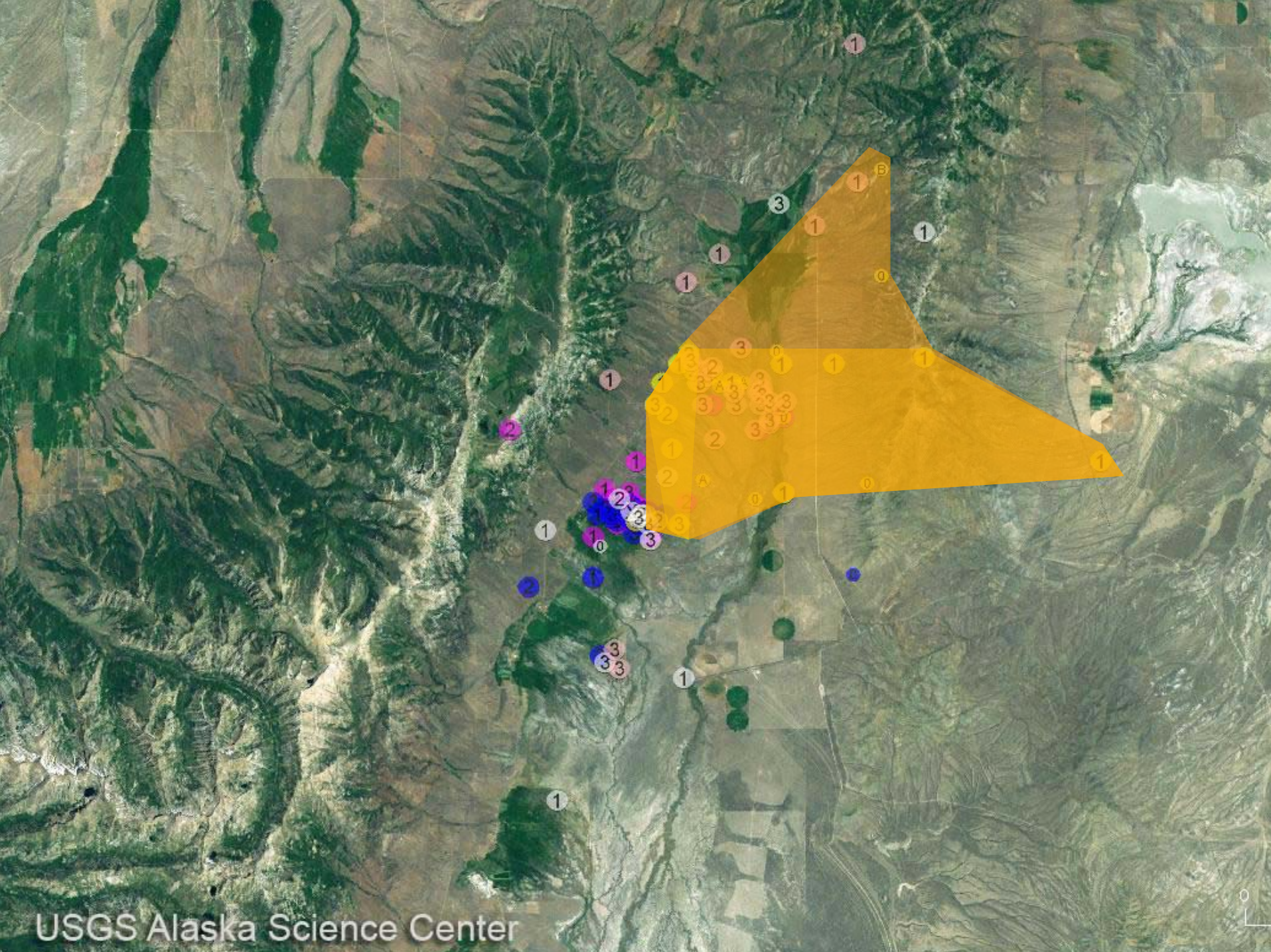
mes>-120dB : 000 Best level : -122 dB Pass duration : 600s NOPC : 4 Calcul

freq : 401 651865.0 Hz Altitude : 0 m
03 12 21 26

Location Classes

- Argos classification based on type of location, error and number of messages received

Class	Type	Error	No. messages
G	GPS	<100m	1
3	Argos	<250m	4
2	Argos	250-500m	4
1	Argos	500-1500m	4
0	Argos	>1500m	4
A	Argos	N/A	3
B	Argos	N/A	2
Z	Argos	N/A	



ArgosDirect

CLS AMERICA / Automatic Distribution Service
ads@datadist.argosinc.com
Sent: Fri 6/30/2006 8:02 AM
To: chartman@unr.nevada.edu

Prog 03256

65549 Date : 30.06.06 10:11:07 LC : 1 IQ : 60

Lat1 : 37.164N Lon1 : 120.987W Lat2 : 36.806N Lon2 : 119.254W Nb mes : 008

Nb mes>-120dB : 000 Best level : -124 dB Pass duration : 540s NOPC : 2

Calcul freq : 401 651760.3 Hz Altitude : 0 m 00 02 138 136

65550 Date : 29.06.06 20:05:44 LC : 1 IQ : 50

Lat1 : 31.692N Lon1 : 116.640W Lat2 : 38.041N Lon2 : 86.160W Nb mes : 005 Nb

mes>-120dB : 000 Best level : -131 dB Pass duration : 360s NOPC : 3 Calcul

freq : 401 651877.0 Hz Altitude : 216 m
01 28 18 15

65550 Date : 29.06.06 21:46:19 LC : 3 IQ : 58

Lat1 : 31.727N Lon1 : 116.676W Lat2 : 0.500N Lon2 : 0.525W Nb mes : 010 Nb

mes>-120dB : 000 Best level : -122 dB Pass duration : 600s NOPC : 4 Calcul

freq : 401 651865.0 Hz Altitude : 0 m
03 12 21 26

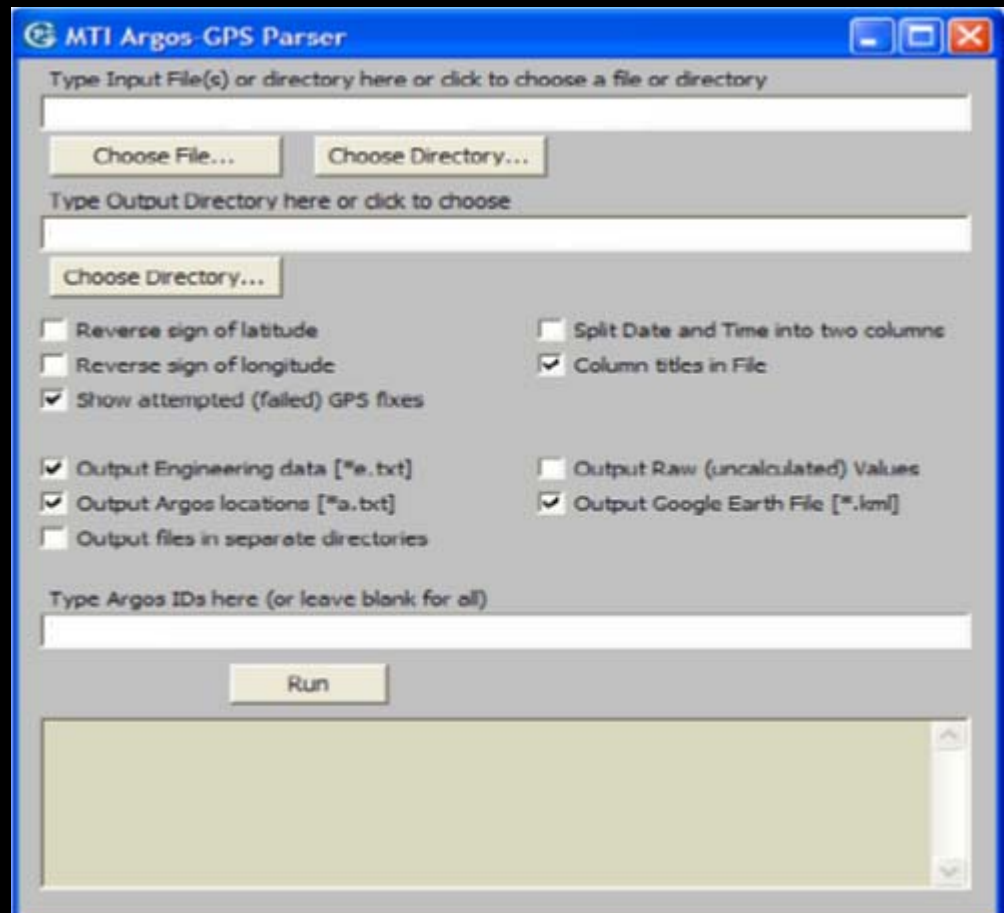
Latitude/Longitude



Data Parsing/Filtering

- Stand alone programs developed by PTT manufacturers

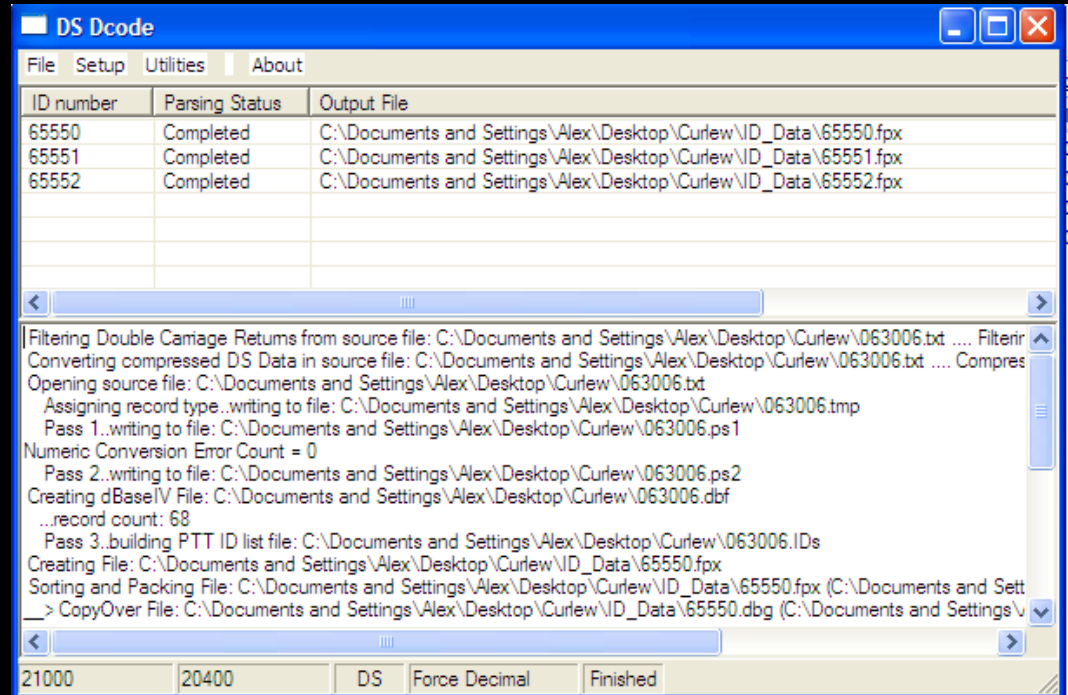
Microwave Telemetry, Inc.



Data Parsing/Filtering

- Stand alone programs developed by PTT manufacturers

North Star Science and
Technology



Data Parsing/Filtering

- Stand alone programs developed by PTT manufacturers

Microsoft Excel - 65549

Type a question for help

File Edit View Insert Format Tools PopTools Data Window Help

100%

Arial

	A	B	C	D	E	F	G	H	I	J	K	L	M
	PTT_ID	PROGRAM	SATELLIT	REC_TYPE	TIME_OM	TIME_OML	QUAL_IDX	QUALITY	LAT	LONG	TX_FREQ	COURSE	S
1	65549	03256	NOAA14	No Fix	2006-04-06 02:40:32	601557504319							
2	65549	03256	NOAA14	Sensor Data	2006-04-06 02:40:32	601557504320							
3	65549	03256	NOAA17	No Fix	2006-04-06 03:25:34	601557531339							
4	65549	03256	NOAA17	Sensor Data	2006-04-06 03:25:34	601557531340							
5	65549	03256	NOAA17	Sensor Data	2006-04-06 03:27:34	601557532540							
6	65549	03256	NOAA17	Sensor Data	2006-04-06 03:28:35	601557533150							
7	65549	03256	NOAA18	Doppler Fix	2006-04-06 07:53:25	601557692049	1	349m < accuracy < 1000m	35.7690	-78.8770	401651673		
8	65549	03256	NOAA18	Sensor Data	2006-04-06 07:53:25	601557692050	1	349m < accuracy < 1000m	35.7690	-78.8770	401651673		
9	65549	03256	NOAA18	Sensor Data	2006-04-06 07:54:25	601557692650	1	349m < accuracy < 1000m	35.7690	-78.8770	401651673		
10	65549	03256	NOAA18	Sensor Data	2006-04-06 07:55:25	601557693250	1	349m < accuracy < 1000m	35.7690	-78.8770	401651673		
11	65549	03256	NOAA18	Sensor Data	2006-04-06 07:56:25	601557693850	1	349m < accuracy < 1000m	35.7690	-78.8770	401651673		
12	65549	03256	NOAA16	Doppler Fix	2006-04-06 08:04:26	601557698659	B	no estimate, < 3 msgs.	35.7420	-78.8180	401651651		
13	65549	03256	NOAA16	Sensor Data	2006-04-06 08:04:26	601557698660	B	no estimate, < 3 msgs.	35.7420	-78.8180	401651651		
14	65549	03256	NOAA16	Sensor Data	2006-04-06 08:07:26	601557700460	B	no estimate, < 3 msgs.	35.7420	-78.8180	401651651		
15	65549	03256	NOAA12	No Fix	2006-04-06 09:33:30	601557752099							
16	65549	03256	NOAA12	Sensor Data	2006-04-06 09:33:30	601557752100							
17	65549	03256	NOAA16	No Fix	2006-04-06 09:47:31	601557760509							
18	65549	03256	NOAA16	Sensor Data	2006-04-06 09:47:31	601557760510							
19	65549	03256	NOAA16	Sensor Data	2006-04-06 09:48:31	601557761110							
20	65549	03256	NOAA15	No Fix	2006-04-06 09:49:31	601557761709							
21	65549	03256	NOAA15	Sensor Data	2006-04-06 09:49:31	601557761710							
22	65549	03256	NOAA15	Sensor Data	2006-04-06 09:50:31	601557762310							
23	65549	03256	NOAA12	Doppler Fix	2006-04-06 11:12:35	601557811549	A	no estimate, < 4 msgs.	35.7650	-78.8780	401651644		
24	65549	03256	NOAA12	Sensor Data	2006-04-06 11:12:35	601557811550	A	no estimate, < 4 msgs.	35.7650	-78.8780	401651644		
25	65549	03256	NOAA12	Sensor Data	2006-04-06 11:13:35	601557812150	A	no estimate, < 4 msgs.	35.7650	-78.8780	401651644		
26	65549	03256	NOAA12	Sensor Data	2006-04-06 11:14:35	601557812750	A	no estimate, < 4 msgs.	35.7650	-78.8780	401651644		
27	65549	03256	NOAA15	Doppler Fix	2006-04-06 11:31:36	601557822959	1	349m < accuracy < 1000m	35.7660	-78.8710	401651647		
28	65549	03256	NOAA15	Sensor Data	2006-04-06 11:31:36	601557822960	1	349m < accuracy < 1000m	35.7660	-78.8710	401651647		
29	65549	03256	NOAA15	Sensor Data	2006-04-06 11:33:36	601557824160	1	349m < accuracy < 1000m	35.7660	-78.8710	401651647		
30	65549	03256	NOAA15	Sensor Data	2006-04-06 11:35:36	601557825359	1	349m < accuracy < 1000m	35.7660	-78.8710	401651647		
31	65549	03256	NOAA15	Sensor Data	2006-04-06 11:36:36	601557825960	1	349m < accuracy < 1000m	35.7660	-78.8710	401651647		
32	65549	03256	NOAA18	Doppler Fix	2006-04-06 19:12:42	601558099619	A	no estimate, < 4 msgs.	35.7120	-78.8140	401651702		

65549

Data Parsing/Filtering

- Douglas Argos-Filter Algorithm



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The Douglas Argos-Filter Algorithm

The Douglas Argos-Filter Algorithm ingests Argos satellite tracking data (DIAG format only) and flags improbable locations based on user-defined distance and velocity thresholds. The algorithm writes all results to ASCII comma-delimited files for spreadsheet or GIS applications, as well as KML 2.0 files compatible with Google™ Earth. The entire unfiltered data set is also output, so in its minimum application, the algorithm is a useful tool for parsing Argos DIAG data into a more convenient digital format.

Service Argos disseminates each location with a location class (LC) accuracy index that falls under two broad categories: standard and auxiliary. Standard locations (LC 3, 2, 1) have an estimated 1-sigma error radius of 250, 500, and 1500 m, respectively, while accuracy of the auxiliary locations (LC 0, A, B, Z) is highly variable and undocumented by Service Argos. Auxiliary locations are largely unsuitable for interpreting animal movements without first addressing accuracy issues.

The Douglas Filter assesses plausibility of every Argos location using two different methodologies based on: 1) distances between consecutive locations; and 2) rates and bearings among consecutive movement vectors. Both filters independently move chronologically through the raw tracking data of each individual animal, evaluating 3 locations at a time. Results of both filters are written to separate output files. The first filter searches for spatiotemporal redundancy, under the premise that significant locational errors rarely occur in the same geographic locale consecutively. The user inputs a distance threshold that defines the spatial scale of "locale". The second filter constructs 2 adjoining vectors and evaluates their velocity, internal angle of intersection, and length, under the premise that significant locational errors are commonly associated with tracking signatures that create implausible movement rates or anomalously acute movement angles. User-defined thresholds for implausible velocity and suspect angles allow the user to adjust the filtering to better conform to a species' movement capability and behavior. Depending on species, one of the two filtering methods typically possesses advantages over the other. For avian species, the algorithm also produces a third output that optimally merges the two filters, since birds intermittently migrate long distances with high velocity and directionality, but during non-migratory periods they tend to occupy relatively localized nesting, molting, staging, or wintering areas.

The Douglas Argos-Filter Algorithm is available from the USGS Alaska Science Center, however, the program requires a PC-SAS® software license for execution.



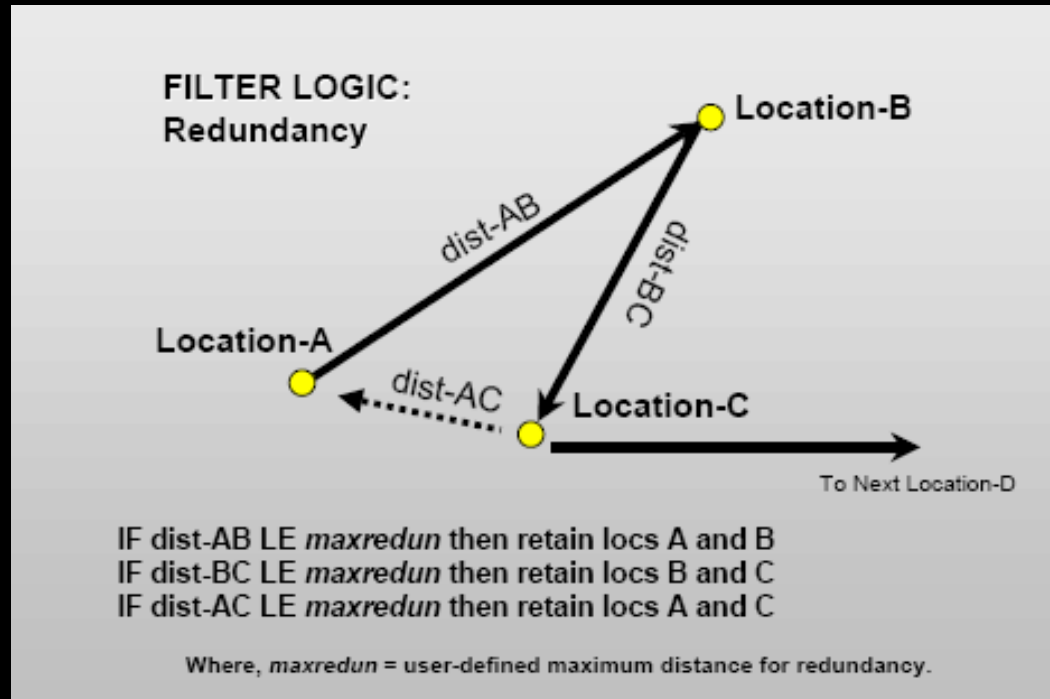
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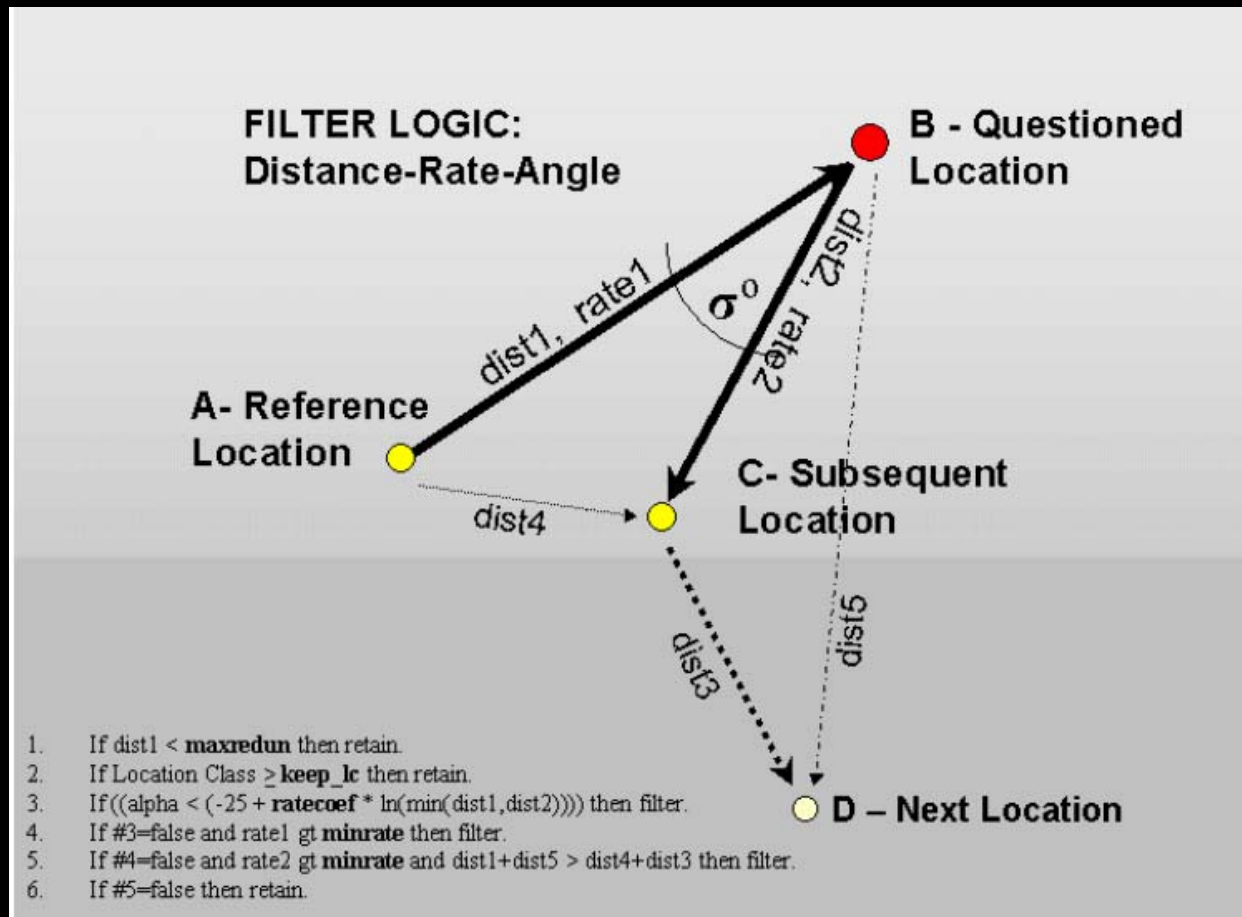
Data Parsing/Filtering

- Douglas Argos-Filter Algorithm



Data Parsing/Filtering

- Douglas Argos-Filter Algorithm



Data Parsing/Filtering

- Argos-Tools for ArcView or ArcGIS

