U.S. Department of Transportation

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Volpe National Transportation Systems Center

AC90-100 File Formats

interference.dat

Purpose: This file contains records which define planned GPS interference testing.

Location

http://sapt.faa.gov/interference.dat

File Format

```
<first ring header record>
<first interference ring record>
<...>
<last  interference ring record>
<...>
<last ring header record>
<...>
<EOF>
```

header ring record format

```
<latitude>,<longitude>,<start date><SP><start time>,<end date><SP><end time>,<ring record count>,
```

interference ring record format

```
<altitude>,<radius>,
```

Field Formats

latitude:	DD.dd
longitude:	DDD.dd
date:	YYYY-MM-DD
time:	hh:mm:ss.s
altitude:	feet
radius:	NM
<SP>:	ASCII <SPACE>
<EOF>:	EOF
D:	Degrees
d:	Decimal Degrees

locations.dat

Purpose: This file contains capital cities, tier 1 airports, and the grid mask for outages calculations. Resolution of the grid mask is set to .5 degree lat/long.

Location

http://sapt.faa.gov/locations.dat

File Format

```
<locid><SP><latitude><SP><longitude><SP><location type><SP><location name>
```

Field Formats

```
locid:                  Variable length string (may not contain spaces)
latitude:               DD.dd
longitude:              DDD.dd
location type:          Integer (1: used in legacy applet Terminal/NPA maps, 2: used in legacy applet En Route/Terminal/NPA maps, 3: Tier 1 Airport)
location name:          variable length string (may contain spaces, terminated by end of line)
<SP>:                   ASCII <SPACE>
<EOF>:                  EOF
```

locations_highres.dat

Purpose: This file contains capital cities, tier 1 airports, and the grid mask for outages calculations at higher resolution than the legacy version. Resolution of the grid mask is set to .125 degrees lat/long.

Location

http://sapt.faa.gov/locations_highres.dat

File Format

```
<locid><SP><latitude><SP><longitude><SP><location type><SP><location
name>
```

Field Formats

```
locid:                Variable length string (may not contain spaces)
latitude:             DD.ddd
longitude:            DDD.ddd
location type:        Integer (1, 2: used in latest En
Route/Terminal/NPA maps, 3: Tier 1 Airport)
location name:        variable length string (may contain spaces,
terminated by end of line)
<SP>:                 ASCII <SPACE>
<EOF>:                EOF
```

outages.dat

Purpose: This file contains records which define predicted periods of GPS RAIM unavailability. Resolution of the outages is set to .5 degree lat/long.

Location

http://sapt.faa.gov/outages.dat

Format

```
<first outage header record>
<first outage record>
<...>
<last outage record>
<... other groups of records ...>
<last outage header record>
<...>
<EOF>
```

outage header record format

```
<receive date><SP><receive time>,<grid cell location>,<outage count>
```

outage record format

```
<start date><SP><start time>,<end date><SP><end time>,<outage type>
```

Field Formats

```
outage type:          {60 | 61 | 62 | 160 | 161 | 162 }
receive date:         <date> and <time> that the cell outage was stored
in the DB
grid cell location:   <N|S><latitude><E|W><longitude>
latitude:             DDdd
longitude:            DDDdd
date:                 YYYY-MM-DD
time:                 hh:mm:ss.s
<SP>:                 ASCII <SPACE>
<EOF>:                EOF
D:                    Degrees
d:                    Decimal Degrees
```

Phase	Without Baro	With Baro
EnRoute	62	162
Terminal	61	161
NPA	60	160

outages_highres.dat

Purpose: This file contains records which define predicted periods of GPS RAIM unavailability. Resolution of the outages is set to .125 degrees lat/long.

Location

http://sapt.faa.gov/outages_highres.dat

Format

```
<first outage header record>
<first outage record>
<...>
<last outage record>
<... other groups of records ...>
<last outage header record>
<...>
<EOF>
```

outage header record format

```
<receive date><SP><receive time>,<grid cell location>,<outage count>
```

outage record format

```
<start date><SP><start time>,<end date><SP><end time>,<outage type>
```

Field Formats

```
outage type:          {60 | 61 | 62 | 160 | 161 | 162 }
receive date:         <date> and <time> that the cell outage was stored
in the DB
grid cell location:   <N|S><latitude><E|W><longitude>
latitude:             DDddd
longitude:            DDDddd
date:                 YYYY-MM-DD
time:                 hh:mm:ss.s
<SP>:                 ASCII <SPACE>
<EOF>:                EOF
D:                    Degrees
d:                    Decimal Degrees
```

Phase	Without Baro	With Baro
EnRoute	62	162
Terminal	61	161
NPA	60	160

last_outages.dat

Purpose: This file contains a Unix timestamp number that is updated after completion of 24+ hours of outages calculation. Its intended use is for a client to determine if the outages files (outages.dat, outages_highres.dat) on the server has been updated and may be requested.

Location:

http://sapt.faa.gov/last_outages.dat

Format:

32-bit Signed Integer

enroute_baro.png, enroute_nobaro.png, terminal_baro.png, terminal_nobaro.png, npa_baro.png, npa_nobaro.png

Purpose: The 'summary' graphics files are geographic snapshots of the outages and availability. These are updated after completion of 24+ hours of outages calculation.

Locations

http://sapt.faa.gov/enroute_baro.png
http://sapt.faa.gov/enroute_nobaro.png
http://sapt.faa.gov/terminal_baro.png
http://sapt.faa.gov/terminal_nobaro.png
http://sapt.faa.gov/npa_baro.png
http://sapt.faa.gov/npa_nobaro.png

Format

PNG (Portable Network Graphics) format

status.txt

Purpose: This file contains information about the effective intervals of times ("Prediction Window") for which the outage data applies. It is updated after completion of 24+ hours of outages calculation. Its intended use is for a client to determine the effective duration of time the outages files (outages.dat, outages_highres.dat) contain information for.

Location

http://sapt.faa.gov/status.txt

Format

```
<outage type><SP><start date><SP><start time><SP><end date><SP><end
time>
<outage type><SP><start date><SP><start time><SP><end date><SP><end
time>
```

Field Formats

outage type:	{61 | 62}
date:	YYYY-MM-DD
time:	hh:mm:ss
<SP>:	ASCII <SPACE>