The OpusFSI **Export World Weather** option will save the downloaded or World Weather Theme world-wide GRIB and METAR data in the **OpusGribExport.dat** and **OpusMetarExport.txt** files. These files being saved in the user's **\OpusFSI\Weather** folder. The format of these files are described in the sections that follow.

OpusFSI GRIB Data Export File Format

Provided the **Export World Weather** option is enabled in the OpusFSI **Weather** dialog, the OpusFSI Live Weather Engine (LWE) will save all downloaded GRIB wind and temperature forecast data in the **\OpusFSI\Weather\OpusGribExport.dat** data file. This file is formatted as follows,

File Header (Length 16 Bytes)

Byte	0xED
Single	Version
Uint32	Minor Version
UInt16	Forecast Year
Byte	Forecast Month
Byte	Forecast Day
Byte	Forecast Hour Cycle
UInt16	Forecast Hour Offset

File Data Content

The file data ranges from latitude -90 degrees (South Pole) through to 0 degrees (Equator), then through to +90 degrees (North Pole). A total of 181 latitude data arrays.

For each latitude array element, the longitude ranges from 0 to 180 degrees, then from -179 through to -1 degrees. A total of 360 longitude GRIB Forecast Data Blocks.

Hence there are a total of 181 * 360 = 65160 GRIB Forecast Data Blocks within the file's data content.

GRIB Forecast Data Block (Length 136 Bytes)

Each GRIB Forecast Data Block contains the following forecasted data.

Uint16	Tropopause Height (Feet)
UInt16	Tropopause Wind Direction (0..360 Degrees)
UInt16	Tropopause Wind Speed (Knots)
Int16	Tropopause Temperature (Celsius)
Uint16	Lower Level 1 Height (Feet)
UInt16	Lower Level 1 Wind Direction (0..360 Degrees)
UInt16	Lower Level 1 Wind Speed (Knots)
Int16	Lower Level 1 Temperature (Celsius)
Uint16	Lower Level 2 Height (Feet)
UInt16	Lower Level 2 Wind Direction (0..360 Degrees)
UInt16	Lower Level 2 Wind Speed (Knots)
Int16	Lower Level 2 Temperature (Celsius)
Uint16	Lower Level 3 Height (Feet)
UInt16	Lower Level 3 Wind Direction (0..360 Degrees)
UInt16	Lower Level 3 Wind Speed (Knots)
Int16	Lower Level 3 Temperature (Celsius)
Uint16	Lower Level 4 Height (Feet)
UInt16	Lower Level 4 Wind Direction (0..360 Degrees)
UInt16	Lower Level 4 Wind Speed (Knots)
Int16	Lower Level 4 Temperature (Celsius)
Uint16	Lower Level 5 Height (Feet)
UInt16	Lower Level 5 Wind Direction (0..360 Degrees)
UInt16	Lower Level 5 Wind Speed (Knots)
Int16	Lower Level 5 Temperature (Celsius)
Uint16	Lower Level 6 Height (Feet)
UInt16	Lower Level 6 Wind Direction (0..360 Degrees)
UInt16	Lower Level 6 Wind Speed (Knots)
Int16	Lower Level 6 Temperature (Celsius)

Uint16	Lower Level 7 Height (Feet)
UInt16	Lower Level 7 Wind Direction (0..360 Degrees)
UInt16	Lower Level 7 Wind Speed (Knots)
Int16	Lower Level 7 Temperature (Celsius)
Uint16	Lower Level 8 Height (Feet)
UInt16	Lower Level 8 Wind Direction (0..360 Degrees)
UInt16	Lower Level 8 Wind Speed (Knots)
Int16	Lower Level 8 Temperature (Celsius)
Uint16	Upper Level 1 Height (Feet)
UInt16	Upper Level 1 Wind Direction (0..360 Degrees)
UInt16	Upper Level 1 Wind Speed (Knots)
Int16	Upper Level 1 Temperature (Celsius)
Uint16	Upper Level 2 Height (Feet)
UInt16	Upper Level 2 Wind Direction (0..360 Degrees)
UInt16	Upper Level 2 Wind Speed (Knots)
Int16	Upper Level 2 Temperature (Celsius)
Uint16	Upper Level 3 Height (Feet)
UInt16	Upper Level 3 Wind Direction (0..360 Degrees)
UInt16	Upper Level 3 Wind Speed (Knots)
Int16	Upper Level 3 Temperature (Celsius)
Uint16	Upper Level 4 Height (Feet)
UInt16	Upper Level 4 Wind Direction (0..360 Degrees)
UInt16	Upper Level 4 Wind Speed (Knots)
Int16	Upper Level 4 Temperature (Celsius)
Uint16	Upper Level 5 Height (Feet)
UInt16	Upper Level 5 Wind Direction (0..360 Degrees)
UInt16	Upper Level 5 Wind Speed (Knots)
Int16	Upper Level 5 Temperature (Celsius)
Uint16	Upper Level 6 Height (Feet)
UInt16	Upper Level 6 Wind Direction (0..360 Degrees)
UInt16	Upper Level 6 Wind Speed (Knots)
Int16	Upper Level 6 Temperature (Celsius)
Uint16	Upper Level 7 Height (Feet)
UInt16	Upper Level 7 Wind Direction (0..360 Degrees)
UInt16	Upper Level 7 Wind Speed (Knots)
Int16	Upper Level 7 Temperature (Celsius)
Uint16	Upper Level 8 Height (Feet)
UInt16	Upper Level 8 Wind Direction (0..360 Degrees)
UInt16	Upper Level 8 Wind Speed (Knots)
Int16	Upper Level 8 Temperature (Celsius)

Each GRIB Forecast Data Block contains the forecasted Tropopause data followed by forecast data for 8 lower altitude levels and 8 upper altitude levels. All altitude levels increase in height from Level 1 through to Level 8.

The full set of GRIB Forecast Data Blocks gives a total File Data Content size of 65160 * 136 = 8,861,760 bytes, and including the File Header a total file size of 8,861,776 bytes (8.45Mb).

OpusFSI METAR Data Export File Format

In addition to the saved GRIB forecast data, the OpusFSI Live Weather Engine (LWE) saves the associated world-wide METAR reports in the **\OpusFSI\Weather\OpusMetarExport.txt** text file. This file contains a consecutive list of date and time stamped METAR reports replicating the standard NOAA format with each METAR report delimitated as follows,

<DATETIME> 0x0A <METAR> 0x0A 0x0A

Where,

<DATETIME>

The date and time stamp for the saved METARs. Stored with a single space character (20 Hex) separating the date and time phrases as follows,

YYYY/MM/DD<space>HH:MN

YYYY = Year (e.g. 2015)
MM = Month (01 to 12)
DD = Day (01 to 31)
HH = Hour (00 to 23)
MN = Minute (00 to 59)

In the METAR data export file all date and time stamps will be identical and reflect the date and time of the saved weather data (e.g. 2015/02/08 09:21).

<METAR>

The METAR report in standard format, for example,

KDLZ 080925Z AUTO 19007KT 10SM CLR 03/M01 A2974 RMK AO

0x0A

New line delimiting character 0A Hex (10 decimal).