DAB Radcap

Fast Information Channel API Extension

This extension to the API retrieves a DAB ensemble's raw Fast Information Channel (FIC) data stream from the driver, allowing access to those Fast Information Groups (FIGs) that the Radcap driver doesn't decode.

The driver provides a buffer storing the most recent six seconds of the FIC, corresponding to 250 logical DAB frames as indexed by the lower modulo-250 CIF counter.

Each logical frame contains three Fast Information Blocks (FIBs), with each FIB comprising 30 data bytes and a two-byte cyclic redundancy check.

```
typedef struct {
	UCHAR Data[30];
	UCHAR CRC[2];
} FIB;

typedef FIB FIBBlock[3];
```

The buffer is thus an array of 250 FIBBlocks, and can be accessed from the API using the following two functions:

```
BOOL __stdcall DabRadcapGetCurrentFIBBlockIndex (UINT CardNum, UINT
EnsembleNum, UCHAR *pFIBBlockIndex);

BOOL __stdcall DabRadcapGetFIBBlock (UINT CardNum, UINT EnsembleNum, UCHAR
Index, FIBBlock *pBlock);
```

The zero-based CardNum and EnsembleNum parameters are the same as in the API's other card-centric functions. Refer to the DAB Radcap manual for details.

The first function retrieves the index of the most recent logical frame written to the buffer, while the second reads the FIBBlock for a given Index value.

To use these functions, poll DabRadcapGetCurrentFIBBlockIndex at a reasonable interval (anything more than the 96ms physical frame rate and sufficiently less than 6 seconds to avoid overflows) and then use DabRadcapGetFIBBlock to read those FIBBlocks that have been added since the last read. A sample program is provided to illustrate this.

Refer to ETSI EN 300 401 for a full description of FIB layout and contents. Be aware that all FIB data fields are big-endian.