



FAST RECOVERY OF DATA LOSS BURSTS FOR BROADCAST TRANSMISSIONS

Innovative method for error-correction coding to improve data protection by means of a system for encoding communication data in bursts

Potential applications

Multimedia broadcasting

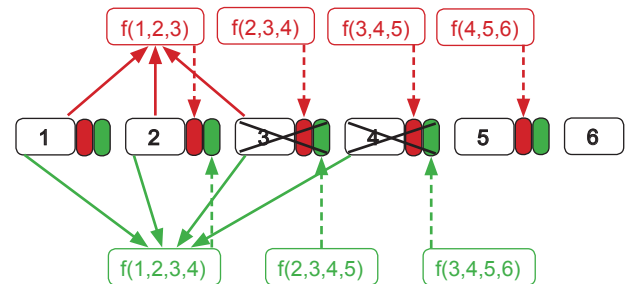
Protection of data for broadcasting content by satellite (DVB or ETSI standards)

Terrestrial broadcasting standard (DVB or LTE 3GPP)

Summary of the invention

Technique for encoding data which enables generation of several different redundant blocks by using all the data in one or more series of information bursts (bursts of encoded bits) of different lengths.

Improves data protection by compensating for transmission errors (long fading in particular).



The loss of bursts 3 and 4 is compensated in 2 and 5 by the weakest redundancy data (red). The loss of a third burst would require the use of stronger redundancy data (green), or even the combined use of several redundancy levels (red and green)

Technological advantages

Complete bursts protected by several redundancy levels

Redundancy is generated from all the information symbols in several bursts.

The redundancy is dispersed among several bursts for transmission.

Several independent linear combinations of information symbols are used to form sequences of redundancy symbols that are independent of each other.

These redundancy data may have different coding interleaving depths and rates.

Protection against long fading

Improves data protection

Big reduction in the number of codewords lost

The choice between redundancies of different lengths offers a flexible trade-off between the system's correction capacities and the decoding times

Commercial benefits

Simple receiver architecture

Time for accessing service adapted to receiving conditions

Unchanged if reception is good

Enables an increase in the capacity (throughput) or reduced time needed to access the service (zapping time)

TRL : 3

Patented invention available under licence