

Title (en)

A data transmission process and system to permit substantial reduction of interference between a received first and second digital signal.

Title (de)

Datenübertragungsverfahren und -system zum weitgehenden Vermindern von Störungen zwischen zwei empfangenen digitalen Signalen.

Title (fr)

Procédé et système de transmission de données pour la diminution de l'interférence entre deux signaux numériques recus.

Publication

EP 0000039 A1 19781220 (EN)

Application

EP 78100063 A 19780601

Priority

US 80315277 A 19770603

Abstract (en)

[origin: US4178550A] The present invention relates to method and apparatus for substantially reducing the effects of interference at a receiver between concurrently received first and second digital signals which use the same frequency spectrum. Interference between signals is effectively reduced by transmitting the first digital signal in an uncoded form while concurrently transmitting the second digital signal with both reduced capacity when compared with the first signal and in coded form using a forward error correcting code such as, for example, a block or convolutional code. At the receiver intercepting both digital signals, a suitable detection process is performed to decode the second signal and separate both signals. The present invention is applicable to the simultaneous satellite transmission of an area coverage beam and a plurality of spot coverage beams or to increase capacity on a radio channel.

IPC 1-7

H04B 7/185; **H01Q 3/00**; **H04L 1/10**

IPC 8 full level

H04J 99/00 (2009.01); **H01Q 25/00** (2006.01); **H03M 13/23** (2006.01); **H04B 7/15** (2006.01); **H04B 7/204** (2006.01); **H04L 1/00** (2006.01)

CPC (source: EP US)

H01Q 25/00 (2013.01 - EP US); **H04B 7/2041** (2013.01 - EP US); **H04L 1/0059** (2013.01 - EP US)

Citation (search report)

- [A] US 3789360 A 19740129 - CLARK G, et al
- COLLOQUE INTERNATIONAL L'ESPACE ET LA COMMUNICATION, Chiron, 1971, Paris, H. KABISCH et al. "Study of a possible regional telecommunication satellite system for Europe", pages 279 to 292
- [P] IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS (Chicago, June 12-15, 1977) New York D.O. REUDINK et al. "Spectral reuse in 12 GHz satellite communication systems", pages 37.5-32 to 37.5-35.
- [T] IEEE TRANSACTIONS ON COMMUNICATIONS TECHNOLOGY, vol. COM-19, nr. 5, October 1971, New York, A.J. VITERBI "Convolutional codes and their performance in communication systems", pages 751 to 772.

Cited by

AU607738B2; EP1037401A3; US6707916B1; WO8804866A1

Designated contracting state (EPC)

BE DE FR GB NL SE

DOCDB simple family (publication)

EP 0000039 A1 19781220; **EP 0000039 B1 19820707**; AU 3669478 A 19791206; AU 520073 B2 19820114; CA 1102880 A 19810609; DE 2861935 D1 19820826; JP S542614 A 19790110; US 4178550 A 19791211

DOCDB simple family (application)

EP 78100063 A 19780601; AU 3669478 A 19780531; CA 303154 A 19780511; DE 2861935 T 19780601; JP 6585978 A 19780602; US 80315277 A 19770603