Title (en)
   Signal switching processor.

Title (de)
   Signalschaltprozessor.

Title (fr)
   Processeur de commutation de signal.

Publication
   EP 0282227 A1 19880914 (EN)

Application
   EP 88301841 A 19880302

Priority
   GB 8705054 A 19870304

Abstract (en)
   A signal switching processor has a plurality of input and output ports, and a number n of signal switching units (7,9) arranged in series between the input and output ports and coupled together so as to generate at each output port a data output signal corresponding to a data input signal supplied to a respective input port. The switching units are mounted in an array of rows, are coupled together by a perfect shuffle optical system (11), and are responsive to received data signals to modulate respective read signals incident on the switching units. Each of the leading n-1 switching units causes the modulated read signals to be reflected towards a respective reflector (25) for subsequent reflection towards the next row in the array of switching units.

IPC 1-7
   G06F 7/56; H04B 9/00; H04Q 3/52

IPC 8 full level
   H04B 10/27 (2013.01); **G06E 3/00** (2006.01); **H04B 10/00** (2013.01); **H04Q 3/52** (2006.01)

CPC (source: EP)
   G06E 3/006 (2013.01)

Citation (search report)
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   • [AD] IEE PROCEEDINGS, vol. 132, part J, no. 6, December 1985, pages 371-383, Hitchin, GB; J.E.MIDWINTER: "'Light' electronics, myth or reality?"
   • [A] IEEE TRANSACTIONS ON COMPUTERS, vol. C-20, no. 2, February 1971, pages 153-161, IEEE, New York, US; H.S.STONE: "Parallel processing with the perfect shuffle"
   • [A] PROCEEDINGS OF THE IEEE, vol. 72, no. 7, July 1984, pages 850-866, IEEE, New York, US; J.W.GOODMAN et al.: "Optical interconnections for VLSI systems"
   • [A] THE 6TH ANNUAL SYMPOSIUM ON COMPUTER ARCHITECTURE, 23rd-25th April 1979, Long Beach, pages 168-177, IEEE, New York, US; J.H.PATEL: "Processor-memory interconnections for multiprocessors"

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Designated contracting state (EPC)
   AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
   EP 0282227 A1 19880914; AU 1360388 A 19880926; GB 8705054 D0 19870408; JP H02502774 A 19900830; WO 8806828 A1 19880907

DOCDB simple family (application)
   EP 88301841 A 19880302; AU 1360388 A 19880302; GB 8705054 A 19870304; GB 8800155 W 19880302; JP 50203988 A 19880302