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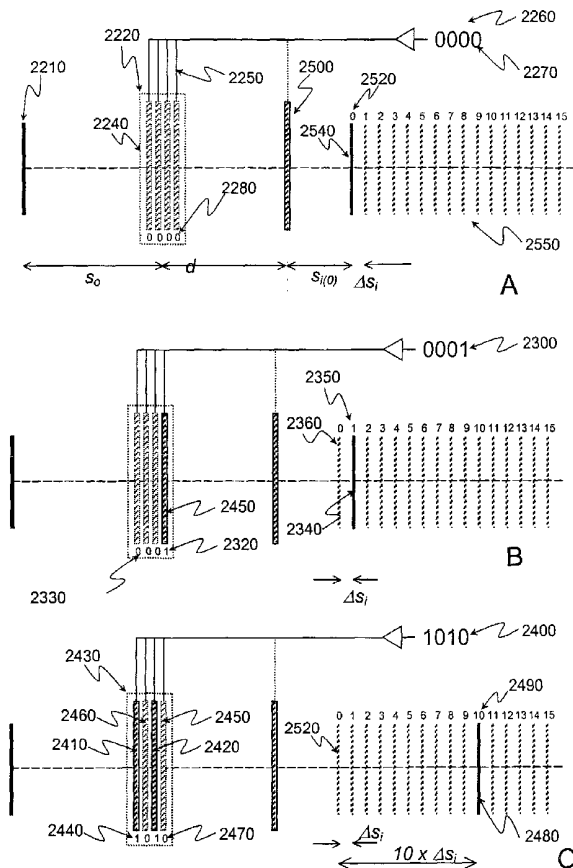
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- (74) Agent: ISENBERG, Joshua; JDI Patent, 204 Castro Lane, Fremont, CA 94539 (US).
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- (71) Applicant and
- (72) Inventor: BATCHKO, Robert [US/US]; 1426 Washington Street, San Francisco, CA 94109 (US).

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(54) Title: COMBINATORIAL OPTICAL PROCESSOR



(57) Abstract: A combinatorial optical processor and method for the architecture of optical systems utilizes one or more optics modules (2240), each module including a number of individually addressable optical elements (2450). The optical elements arranged and addressed in a combinatorial-arithmetic fashion such that a set of optical filter functions are defined and can be performed by the optical modules. The number of optical filter functions may be an exponential function of the number of addressable optical elements. Additionally, each of the optical filter functions may be addressed at random and a plurality of such functions may be addressed simultaneously. Apparatus (3010), such as imaging systems, may employ the combinatorial optical processor in order to include without limitation the features of being solid-state, projection of images into free space and random addressability of the filter functions.



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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 359/15, 107, 108 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched NONE Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO EAST		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,764,890 A (HINTON) 16 August 1988 (16.08.1988), see entire document.	1-6, 9-20, 28, 29, 37-40, 46-48, 53 ----- 41
X,P --- Y,P	US 6,295,145 B1 (POPOVICH) 25 September 2001 (25.09.2001), see entire document.	54-63, 66-69, 70, 146 ----- 41
X,P	US 6,185,016 B1 (POPOVICH) 06 February 2001 (06.02.2001), see entire document.	95-98, 104, 105, 113-123
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230		Authorized officer LEO BOUTSIKARIS Telephone No. (703) 306-5730 <i>Renée Paulson</i>

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 6,178,020 B1 (SCHULTZ et al) 23 January 2001 (23.01.2001), see entire document.	7-8, 21-27, 30-36, 42-45, 49-52, 64-65, 71-94, 99-103, 106-112, 119, 121, 124-145, 147