

Title (en)  
APPARATUS AND METHODS FOR FORMING AND USE WITH VARIABLE PIT DEPTH OPTICAL RECORDING MEDIA

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR HERSTELLUNG UND VERWENDUNG EINES MIT LÖCHERN UNTERSCHIEDLICHEN TIEFEN  
OPTISCHEN DATENTRÄGERS

Title (fr)  
DISPOSITIF ET PROCEDES DE CREATION ET D'UTILISATION D'UN SUPPORT D'ENREGISTREMENT OPTIQUE COMPORTANT DES Puits  
A PROFONDEURS VARIABLES

Publication  
**EP 0888612 A4 19991229 (EN)**

Application  
**EP 97917035 A 19970324**

Priority  
• US 9704941 W 19970324  
• US 62019696 A 19960322

Abstract (en)  
[origin: WO9735304A1] An apparatus (figure 2) and method for forming a digital optical disc master from a disc having a substrate (300) coated with a photoresist coating (320). The method includes irradiating the surface of the photoresist material (320) with a laser beam (310) at a multiplicity of pit locations over the substrate (300) causing the photoresist material (320) to react to the laser radiation (310) to form at least three different discrete levels at the multiplicity of pit locations relative to the surface of the substrate (300) due to the dose of radiation applied being calculated to react with the photoresist to a depth equivalent to the discrete levels. The exposed photoresist is then developed to achieve the pits having the different discrete levels. A further method is disclosed for equalization and compensation for intersymbol interference between adjacent pits.

IPC 1-7  
**G11B 7/007**; **G11B 7/00**; **G11B 3/70**; **G11B 20/18**

IPC 8 full level  
**G11B 7/005** (2006.01); **G11B 20/10** (2006.01); **G11B 20/14** (2006.01); **G11B 27/10** (2006.01); **G11B 27/30** (2006.01); **G11B 27/36** (2006.01)

CPC (source: EP)  
**G11B 7/0052** (2013.01); **G11B 20/10009** (2013.01); **G11B 20/1403** (2013.01); **G11B 20/1496** (2013.01); **G11B 27/10** (2013.01);  
**G11B 27/3027** (2013.01); **G11B 27/36** (2013.01)

Citation (search report)  
• [XA] EP 0375342 A2 19900627 - MATSUSHITA ELECTRIC IND CO LTD [JP]  
• [X] US 4423502 A 19831227 - DIL JAN G [NL]  
• [X] US 4455632 A 19840619 - BRAAT JOSEPHUS J M [NL]  
• [A] US 5446717 A 19950829 - TOMITA YOSHIMI [JP]  
• [A] US 5488591 A 19960130 - KOBAYASHI MICHIO [JP], et al  
• [PX] US 5586100 A 19961217 - LEE TZUO-CHANG [US], et al  
• [XA] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 06 31 July 1995 (1995-07-31)  
• [A] PATENT ABSTRACTS OF JAPAN vol. 018, no. 159 (P - 1711) 16 March 1994 (1994-03-16)  
• See references of WO 9735304A1

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