

5-22-00

PROV

PTO/SB/16 (2-98)

Approved for use through 01/31/2001. OMB 0651-0037

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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### PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR §1.53(c).

#### INVENTOR(S)

Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
Hui	Jin	Pasadena, CA
Aamod	Khandekar	Pasadena, CA
Robert	McElice	Pasadena, CA

Additional inventors are being named on the 0 separately numbered sheets attached hereto.

#### TITLE OF THE INVENTION (280 characters max)

SERIAL INTERCONNECTION OF A LOW-DENSITY GENERATOR CODE WITH A DIGITAL RECURSIVE FILTER

#### CORRESPONDENCE ADDRESS

Direct all correspondence to:

Customer Number: 20985  
OR

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<input checked="" type="checkbox"/> Firm or Individual Name	Fish & Richardson P.C. (Southern California)				
Address	4350 La Jolla Village Drive, Suite 500 San Diego, CA 92122				
Country	United States	Telephone	(858) 678-5070	Fax	(858) 678-5099

#### ENCLOSED APPLICATION PARTS (check all that apply)

<input checked="" type="checkbox"/> Specification	Number of Pages	<u>33</u>	<input type="checkbox"/> Small Entity Statement
<input type="checkbox"/> Drawing(s)	Number of Sheets	<u>0</u>	<input type="checkbox"/> Other (specify) <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>

#### METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)

<input checked="" type="checkbox"/> A check or money order is enclosed to cover the filing fees.	FILING FEE AMOUNT (\$)
<input type="checkbox"/> The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: <u>06-1050</u>	<u>\$150</u>

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

No.  
 Yes, the name of the U.S. Government agency and the Government contract number are: Grant No. CCR-9804793

Respectfully submitted,

Bing ai  
Signature

Reg. No. 43,312  
Name Scott C. Harris, Reg. No. 32,030

Date May 18, 2000

Telephone No. (858) 678-5070

Docket No. 06618/637001/CIT3220  
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Signature Derek W. Norwood

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JCS41 U.S. PTO  
60/205095  
05/18/00

PROVISIONAL APPLICATION FOR PATENT

under

37 CFR §1.53(c)

TITLE: SERIAL INTERCONNECTION OF A LOW-DENSITY  
GENERATOR CODE WITH A DIGITAL RECURSIVE  
FILTER


APPLICANT: HUI JIN, AAMOD KHANDEKAR AND ROBERT  
MECLIECE

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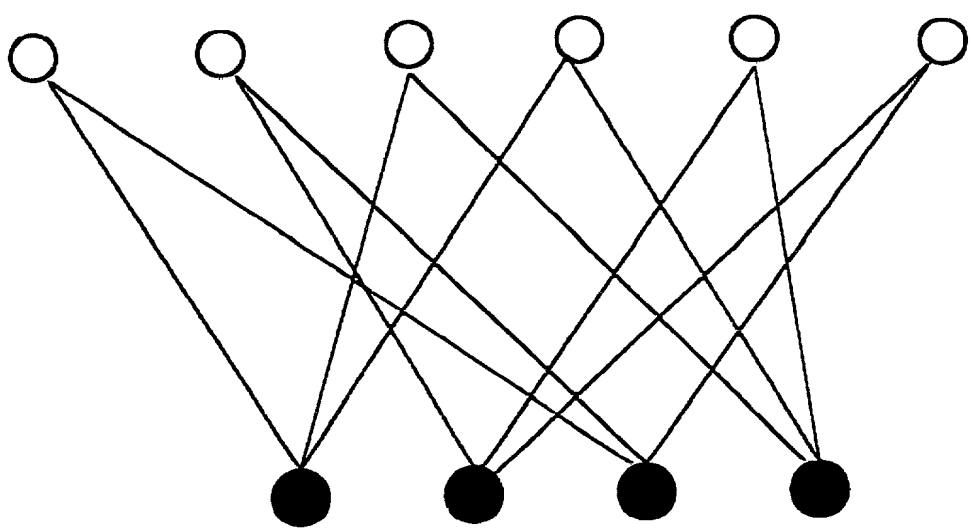
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Derek W. Norwood  
Typed or Printed Name of Person Signing Certificate



# Low-Density Parity-Check Codes

Gallager 1963



05-18-2000 04:29pm From-

# Irregular LDPC Codes

- Idea: Introduce irregularity into degree of variable nodes and check nodes.
- Binary erasure channel: Luby, Mitzenmacher, Shokrollahi, Spielman, 1997.
- AWGN, Binary symmetric channel: Richardson, Urbanke, Shokrollahi, 1999.

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