Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/US2008/056064

International filing date: 06 March 2008 (06.03.2008)

Document type: Certified copy of priority document

Document details:
Country/Office: US
Number: 60/940,383
Filing date: 25 May 2007 (25.05.2007)

Date of receipt at the International Bureau: 29 March 2008 (29.03.2008)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)

World Intellectual Property Organization (WIPO) - Geneva, Switzerland
Organisation Mondiale de la Propriété Intellectuelle (OMPI) - Genève, Suisse

56319

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

March 29, 2008

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE.

APPLICATION NUMBER: ***60/940,383***
FILING DATE: ***May 25, 2007***
RELATED PCT APPLICATION NUMBER: ***PCT/US08/56064***

THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS ***US60/940,383***

UNITED STATES PATENT AND TRADEMARK OFFICE
DEPARTMENT OF COMMERCE

Certified by

Jon W. Dudas

Under Secretary of Commerce
for Intellectual Property
and Director of the United States
Patent and Trademark Office

FULLY CONNECTED GENERALIZED MULTI-STAGE NETWORKS

Venkat Konda

CROSS REFERENCE TO RELATED APPLICATIONS

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0038US entitled "FULLY CONNECTED GENERALIZED BUTTERFLY FAT TREE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed concurrently.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0039US entitled "FULLY CONNECTED GENERALIZED REARRANGEABLY NONBLOCKING MULTI-LINK MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed concurrently.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0040US entitled "FULLY CONNECTED GENERALIZED MULTI-LINK BUTTERFLY FAT TREE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed concurrently.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0041US entitled "FULLY CONNECTED GENERALIZED FOLDED MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed concurrently.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0042US entitled "FULLY CONNECTED GENERALIZED STRICTLY NONBLOCKING MULTI-LINK MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed concurrently.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0045US entitled "VLSI LAYOUTS OF FULLY CONNECTED GENERALIZED NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed concurrently.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1A is a diagram 100A of an exemplary symmetrical multi-stage network $V(N,d,s)$ having inverse Benes connection topology of five stages with N = 8, d = 2 and s=2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1B is a diagram 100B of a general symmetrical multi-stage network $V(N,d,2)$ with $(2\times\log_d N)-1$ stages strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections in accordance with the invention.

FIG. 1C is a diagram 100C of an exemplary asymmetrical multi-stage network $V(N_1,N_2,d,2)$ having inverse Benes connection topology of five stages with $N_1 = 8$, N2 = p* N_1 = 24 where p = 3, and d = 2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1D is a diagram 100D of a general asymmetrical multi-stage network $V(N_1,N_2,d,2)$ with N_2 = p* N_1 and with $(2\times\log_d N)-1$ stages strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections in accordance with the invention.

FIG. 1E is a diagram 100E of an exemplary asymmetrical multi-stage network $V(N_1,N_2,d,2)$ having inverse Benes connection topology of five stages with $N_2 = 8$, N_1 = p* N_2 = 24, where p = 3, and d = 2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1F is a diagram 100F of a general asymmetrical multi-stage network $V(N_1, N_2, d, 2)$ with N_1 = p* N_2 and with $(2 \times \log_d N) - 1$ stages strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections in accordance with the invention.

FIG. 1A1 is a diagram 100A1 of an exemplary symmetrical multi-stage network $V(N, d, 2)$ having Omega connection topology of five stages with N = 8, d = 2 and s=2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1C1 is a diagram 100C1 of an exemplary asymmetrical multi-stage network $V(N_1, N_2, d, 2)$ having Omega connection topology of five stages with N_1 = 8, N_2 = p* N_1 = 24 where p = 3, and d = 2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1E1 is a diagram 100E1 of an exemplary asymmetrical multi-stage network $V(N_1, N_2, d, 2)$ having Omega connection topology of five stages with N_2 = 8, N_1 = p* N_2 = 24, where p = 3, and d = 2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1A2 is a diagram 100A2 of an exemplary symmetrical multi-stage network $V(N, d, 2)$ having nearest neighbor connection topology of five stages with N = 8, d = 2 and s=2 with exemplary multicast connections, strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.

FIG. 1C2 is a diagram 100C2 of an exemplary asymmetrical multi-stage network $V(N_1, N_2, d, 2)$ having nearest neighbor connection topology of five stages with N_1 = 8, N_2 = p* N_1 = 24 where p = 3, and d = 2 with exemplary multicast connections, strictly

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

WHAT WILL YOU BUILD? | **sales@docketalarm.com** | **1-866-77-FASTCASE**

fastcase®
Smarter legal research.