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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHANDRA S. CHEKURI, SANJEEV KHANNA,
and FREDERICK BRUCE SHEPARD[1]

Appeal 2010-007070
Application 11/287,890
Technology Center 2400

Before DAVID M. KOHUT, LARRY J. HUME, and JOHN G. NEW, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final rejection of claims 1-20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] The Real-Party-in-Interest is Lucent Technologies Inc. (App. Br. 1.)

STATEMENT OF THE CASE [2]

The Invention

Appellants' invention is directed to a method and apparatus for designing traffic distribution on a multiple-service packetized network using multi-commodity flows and well-linked terminals. Further, Appellants' invention relates generally to "traffic engineering" techniques that distribute traffic among permissible routes, and more particularly, to "traffic engineering" techniques that are based on multi-commodity flows and well-linked terminals. Spec. p. 1, ll. 12-14.

Exemplary Claim

Claim 1 is an exemplary claim representing an aspect of the invention which is reproduced below (***emphasis*** added):

> 1. A method for transforming arbitrary multicommodity flows f to sets of well-linked terminals, wherein said multicommodity flows are represented in a graph G having a set of k node-pairs $s_1,t_1,\ldots,s_k,t_k$. each having a positive integer demand d_i and a positive weight w_i, said method comprising:
>
> partitioning said graph G into a collection of node-disjoint sub graphs wherein each sub-graph H contains a set of terminals, where π is a non-negative weight function on a set X of nodes in said graph G; and

[2] Our decision refers to Appellants' Appeal Brief ("App. Br.," filed Jan. 5, 2010); Reply Brief ("Reply Br.," filed Apr. 2, 2010); Examiner's Answer ("Ans.," mailed Feb. 2, 2010); Final Office Action ("FOA," mailed Jul. 23, 2009); and the original Specification ("Spec.," filed Nov. 28, 2005).

> ***clustering said set of terminals to a subset of terminals that is at least 1/4-flow-linked or 1/4-cut-linked***, wherein said clustering is performed by a processor.

Prior Art

The Examiner does not rely upon any prior art in rejecting the claims on appeal.

Rejections on Appeal

Claims 1-20 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Ans. 3.

ISSUE

Appellants argue (App. Br. 3-6; Reply Br. 2-4) that the Examiner's enablement rejection of claim 1 under 35 U.S.C. § 112, first paragraph, is in error. These contentions present us with the following issue:

> Did the Examiner err in finding that Appellants' Specification lacks enablement for any person skilled in the art to which it pertains, or with which it is most nearly connected, to use Appellants' claimed method which includes, *inter alia*, "clustering said set of terminals to a subset of terminals that is at least 1/4-flow-linked or 1/4-cut-linked," as recited in claim 1?

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellants' arguments that the Examiner has erred. We disagree with Appellants' conclusions with respect to claim 1, and we adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken and (2) the reasons and rebuttals set forth by the Examiner in

the Examiner's Answer in response to Appellants' Arguments. However, we highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

We agree with Appellants that the Mitra patent (USP 6,721,270), discussed in the Background Section of Appellants' Specification and arguments (*see* Spec. 2, ll. 7-11; Reply Br. 3) provides evidence of prior art knowledge of multicommodity flows. However, we find that this acknowledgement of the prior art does not enable a person with skill in the art to make and use Appellants' claimed invention.[3]

We agree with the Examiner's finding that Appellants' Specification does not adequately enable the limitation of "clustering said set of terminals to a subset of terminals that is at least 1/4-flow-linked or 1/4-cut-linked," as recited in claim 1. (Ans. 8-9).

Further in this regard, we also agree with the Examiner that:

> Teachings of the Specification (See Appeal Brief; page 4, line 19-page 5, line 6) include [a] plurality of formulas, but do not include particular steps or actions of clustering said set of terminals to a subset of terminals that is at least 1/4-flow-linked or 1/4-cut-linked, where sub-graph H contains a set of terminals, where π is a non-negative weight function on a set X of nodes in said graph G. This section of the specification does not include teachings of which formula of plurality of formulas

[3] Similarly, Appellants' statement (Reply Br. 6) that "the present disclosure incorporates by reference numerous references which provide additional support and background information for the present invention," is not persuasive or responsive to the Examiner's finding that at least the "clustering" limitation is not enabled by Appellants' disclosure. Ans. 8-9.

> [is] being used to achieve clustering said set of terminals to a subset of terminals . . . .

Ans. 10. While Appellants' Figure 4 and related disclosure (Spec. 11-12) provides a discussion of "a flow chart describing an exemplary clustering process 400 incorporating features of the present invention," we further agree with the Examiner that the Specification fails to provide enablement by way of an illustrative example of how one skilled in the art would make or use the claimed invention. *Id*.[4]

We further disagree with Appellants' contention that:

> The Examiner's allegation does not consider the prior knowledge of a person of ordinary skill **in the art** . . . [Mitra] is evidence of the state-of-the-art for the present invention; in light of the present disclosure, a person of ordinary skill **in the art** would be capable of implementing the steps of partitioning a graph *G* into a collection of node-disjoint subgraphs wherein each sub-graph *H* contains a set of terminals, where π is a non-negative weight function on a set *X* of nodes in the graph *G*; and clustering the set of terminals to a subset of terminals that is at least 1/4-flow-linked or 1/4-cut-linked.

Reply Br. 4 (**emphasis** in original). Appellants' assertions regarding the capability of a person of ordinary skill in the art amount to unsupported attorney argument, and therefore we give them little weight. *See In re*

[4] Although not dispositive to our Decision, we note that Appellants' Specification incorporates much of the material from the named inventors' technical paper, "Multicommodity Flow, Well-Linked Terminals, and Routing Problems," Chandra Chekuri, Sanjeev Khannay, and F. Bruce Shepherd, *STOC'05,* May 22-24, 2005, Baltimore, Maryland, USA. While this paper provides an academic discussion of algorithmic theory as it relates to multicommodity routing problems, we question whether such a technical paper provides a proper basis for establishing an enabling disclosure in support of the specific patent claims on appeal.

Geisler, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *see also In re Huang*, 100 F.3d 135, 139-140 (Fed. Cir. 1996).

Therefore, without having sufficient evidence before us to rebut the Examiner's imputed characterization of the knowledge of a person with skill in the art, we do not find error in the Examiner's enablement rejection of claim 1, and particularly find no error in the Examiner's characterization of Appellants' disclosure and related claim construction. Therefore, we sustain the Examiner's lack of enablement rejection of claim 1. As Appellants have not provided separate arguments with respect to independent claims 9 and 17, or dependent claims 2-8, 10-16, and 18-20, and since these claims have the same deficiencies as independent claim 1, we similarly sustain the Examiner's enablement rejection of these claims under 35 U.S.C. § 112, first paragraph.

CONCLUSION

The Examiner did not err with respect to the enablement rejection of claims 1-20 under 35 U.S.C. § 112, first paragraph, and the rejection is sustained.

DECISION

The decision of the Examiner to reject claims 1-20 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2011).

AFFIRMED

msc