

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JUERGEN REINOLD and DONALD J. REMBOSKI

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Appeal 2006-0342  
Application 09/944,893  
Technology Center 2100

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Decided: March 30, 2007

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Before HOWARD B. BLANKENSHIP, ALLEN R. MACDONALD, and  
ST. JOHN COURTENAY III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-15.

### THE INVENTION

The disclosed invention relates generally to the field of communication systems for vehicles such as automobiles and trucks, and more particularly, to communicatively coupling devices within the vehicle (Specification 1).

Representative claim 1 is illustrative:

1. In a vehicle comprising a first device and a second device and an active network communicatively coupling the first device and the second device for the communication of data between the first device and the second device, the active network being operable to encrypt the data.

### THE REFERENCES

The Examiner relies upon the following references as evidence of unpatentability:

Daniels	US 5,991,401	Nov. 23, 1999
Pogue	US 5,995,512	Nov. 30, 1999
Wright	US 6,101,599	Aug. 8, 2000

David L. Tennenhouse, "Towards an Active Network Architecture," ACM website (1996) (as cited by the Examiner in the Answer).<sup>1</sup>

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<sup>1</sup> We note the Tennenhouse journal article was published twice (in 1996 and 2002). The 2002 publication appears to be identical to the 1996 publication. We rely on the prior art 1996 ACM publication cited by the Examiner (Answer 3).

2002 Version (not prior art):

David L. Tennenhouse & David J. Wetherall, "Towards an Active Network Architecture", Telemedia, Networks & Sys. Group, MIT; DARPA Active Networks Conference and Exposition (DANCE '02), 2002 Proceedings, San

### THE REJECTIONS

The following rejections are on appeal before us:

1. Claims 1-4, 6, and 8-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Pogue in view of Daniels.
2. Claims 5 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Pogue in view of Daniels, and further in view of Wright.
3. Claims 1-7, 9-12, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Pogue in view of Tennenhouse.
4. Claims 8, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Pogue in view of Tennenhouse, and further in view of Daniels.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for the respective details thereof.

### OPINION

Only those arguments actually made by Appellants have been considered in this decision. It is our view, after consideration of the record

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Francisco, CA, USA, 05/29/2002 - 05/30/2002, Publication Date: 2002, pp. 2-15 (ISBN: 0-7695-1564-9).

1996 Version (prior art):

David L. Tennenhouse & David J. Wetherall, "Towards an Active Network Architecture", ACM SIGCOMM Computer Communication Review, ACM Press, New York, N.Y., April 1996, Vol. 26, Issue 2, pp. 5-18 (ISSN:0146-4833).

Appeal 2006-0342  
Application 09/944,893

before us, that the evidence relied upon supports the Examiner's rejection of the claims on appeal. Accordingly, we affirm.

#### Claims 1-4, 6, and 8-15

We consider first the Examiner's rejection of claims 1-4, 6, and 8-15 as being unpatentable over Pogue in view of Daniels. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select independent claim 1 as the representative claim for this rejection because it is the broadest independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants state they do not provide a special definition of the claim term "active network." Instead, Appellants assert the term "active network" must be given its *plain meaning*, i.e., it must be read as it would be interpreted by those of ordinary skill in the art (Br. 7, emphasis added). Referring to the articles by Tennenhouse et al.,<sup>2</sup> Appellants assert that the interpretation of the term "active network" given by those of ordinary skill in the art is clear, as follows:

[A]n active network is a network including nodes capable of performing custom operations on the messages that pass through the nodes; does not require a central server or computing resource; are aware of the contents of the messages transported and can participate in the processing and modification of the message while they travel through the network.

(Br. 7).

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<sup>2</sup> The Tennenhouse articles were attached as Appendices to the Brief.

Appeal 2006-0342  
Application 09/944,893

Appellants argue Pogue does not teach such an “active network.” Appellants assert the Examiner’s interpretation of the term “active network” does not conform to what one of ordinary skill in the art would understand an active network to be and is inconsistent with the teachings of the Specification (Br. 8). Appellants argue the networks taught by Pogue and Daniels are not “active networks,” as that term is used in the claims (Br. 9). Nevertheless, Appellants specifically admit:

Notwithstanding that the references fail to teach an active network, the applicants admit that the term active network describes a known network type. *See* Appendices B, C and D.

(Br. 9, last paragraph).

Appellants further argue the prior art of record fails to establish a suggestion or motivation to use an active network in a vehicle. Appellants conclude the Examiner has impermissibly used hindsight in formulating the rejection (Br. 10).

The Examiner disagrees. The Examiner points to page 8 of the Specification and finds an active network may broadly include a plurality of active elements enabling communication paths. The Examiner concludes the term “active network” is not defined in the Specification with reasonable clarity, deliberateness, and precision. The Examiner broadly construes the term “active network” to mean active network elements used in connection with the [network] fabric to include any number of *intelligent structures* for communicating data packets (Specification 9: 16-21, emphasis added). The Examiner finds Pogue teaches at least one embodiment where *intelligent devices* perform network-related functions (Pogue, Abstract). The Examiner

concludes that Pogue's *intelligent devices* meet the definition of an active network as defined in the Specification (9: 16-21) (Answer 7-8).

In the Reply Brief, Appellants point out the Examiner states that Pogue does not disclose encrypting data or *an active network* (i.e., with respect to new grounds of rejection, Pogue in view of Tennenhouse, discussed *infra*) (*see* Answer 6, ¶ 2, first line, emphasis added). Appellants restate their argument that the Examiner has impermissibly relied upon hindsight in formulating the rejection (Reply Br. 2-4).

At the outset, we do not agree with the Examiner's statement (made in applying the new grounds of rejection) that Pogue does not disclose an active network (*see* Answer 6, ¶ 2). We note the Examiner's statement directly contravenes the earlier position the Examiner took in rejecting representative claim 1 as being unpatentable over Pogue in view of Daniels (*see* Answer 3). We find the Examiner was correct in the first instance. In particular, we agree with the Examiner's first position that Pogue's disclosure of "intelligent nodes" meets the language of the claim that recites an "active network" (claim 1). We note Pogue discloses the capabilities of "intelligent nodes" as follows:

Intelligent nodes generally have some level of microprocessing power that can be made available for controlling some aspect of the node's interaction with the network data bus, while a dumb node would generally have either no processing power or no available processing power. Preferably, the interface circuit can be configured to recognize whether its associated node is intelligent or dumb, transfer some portion of the data bus control functions to the node if the node is intelligent, and maintain substantially all of the data bus controls within the interface unit (or some other portion of the network data bus) if the node is determined to be dumb.

Appeal 2006-0342  
Application 09/944,893

(Pogue, col. 2, ll. 10-21).

In particular, we note Pogue discloses at least one embodiment where “intelligent nodes” are implemented with a microprocessor (*see e.g.*, col. 11, ll. 43-44, “the controller 74 is typically the node microprocessor that controls the node,” *see also* col. 27, ll. 55-57). Pogue further discloses the processing of message data at the node:

A controller 74 on the node device is connected to the IC 64 through an IIC compatible (but preferably faster) connection. All configuration, status, and *message data* is available to the external device through this port.

(col. 12, ll. 55-58, emphasis added).

Because Pogue’s “intelligent nodes” include a microprocessor that processes message data, we find Pogue’s “intelligent nodes” are: (1) *capable of* performing custom operations on messages that pass through the nodes, (2) do not require a central server or computing resource, (3) are aware of the contents of transported messages, and (4) *can* participate (i.e., are *capable of* participating) in the processing and modification of messages traveling through the network (*See* Appellants’ proffered plain meaning of the claim term “active network,” *supra*, *see also* Br. 7).

We emphasize that Appellants have specifically used the language “capable of” and “can participate” in construing the plain meaning of an “active network” (*see* Br. 7). Thus, we find Pogue’s teaching of “intelligent nodes” in a vehicle network clearly meets Appellants’ proffered plain meaning of the claim term “active network” (*see* Br. 7).

Furthermore, we do not agree with Appellants' assertion that the Examiner has impermissibly used hindsight in formulating the rejection. We note Pogue specifically discloses a high-speed network where "[t]he preferred operating environment is a transportation vehicle such as a car, van, truck, bus, train or airplane" (col. 7, ll. 1-3). Pogue discloses the advantages of such a vehicle network as follows:

For high-speed communications between many locations or nodes in a vehicle, an optical fiber transmission medium arranged in a star topology is *less expensive* and *less complicated* than dedicated point-to-point connections or a hard-wired electrical network.

(col. 7, ll. 36-41, emphasis added).

We note our reviewing court has recently reaffirmed that:

an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient ... In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him *capable* of combining the prior art references.

*DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1368, 80 USPQ2d 1641, 1651 (Fed. Cir. 2006) (emphasis in original).

In the instant case, we find the ordinary artisan who possessed knowledge and skills relating to vehicle computer systems would have been *capable of* combining Pogue's vehicle network system and Daniels' data

Appeal 2006-0342  
Application 09/944,893

encryption in the manner suggested by the Examiner for the purpose of realizing a *more secure* vehicle system. As an example, we find a more secure vehicle network would have been suggested by the need to have a secure means of locking and unlocking electronic vehicle door and trunk latches. We further find Pogue's use of "symbol encoder 126" (Fig. 12, col. 22, l. 35) and "symbol decoder 120" (Fig. 11, col. 18, l. 65, col. 24, ll. 1-2) broadly suggests the use of some form of data encryption. Therefore, for at least the aforementioned reasons, we conclude the Examiner has met the burden of establishing a prima facie case of obviousness. Accordingly, we will sustain the Examiner's rejection of representative claim 1 as being unpatentable over Pogue in view of Daniels. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to claims 2-4, 6, and 8-15 on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of these claims as being unpatentable over Pogue in view of Daniels for the same reasons discussed *supra* with respect to representative claim 1.

#### Dependent claims 5 and 7

We consider next the Examiner's rejection of dependent claims 5 and 7 as being unpatentable over the teachings of Pogue in view of Daniels, and further in view of Wright.

We see no deficiencies with respect to Pogue as modified by Daniels, as discussed *supra*. We note that Appellants have not presented any substantive arguments directed separately to the patentability of claims 5 and 7. In the absence of a separate argument with respect to the dependent claims, those claims stand or fall with the representative independent claim.

Appeal 2006-0342  
Application 09/944,893

*See In re Young*, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). Therefore, we will sustain the Examiner's rejection of these claims as being unpatentable over Pogue in view of Daniels, and further in view of Wright for the same reasons discussed *supra* with respect to independent claim 1.

Claims 1-7, 9-12, and 15

We consider next the Examiner's rejection of claims 1-7, 9-12, and 15 as being unpatentable over Pogue in view of Tennenhouse. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select independent claim 1 as the representative claim for this rejection because it is the broadest independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

In response to the new grounds of rejection, Appellants argue the Examiner has failed to establish a teaching, suggestion, or motivation that would lead an artisan to use an active network in a vehicle and, further, to encrypt data in a vehicle. Appellants restate their argument that the Examiner has impermissibly relied upon hindsight in formulating the rejection (Reply Br. 3-4).

With respect to this rejection, we find the cited Tennenhouse reference (included as an Appendix to the Brief) explicitly teaches an *active network* (*See* ¶3, "Active Networks"). We also find Appellants have specifically admitted in the Brief that such active networks are *known in the art*:

Appeal 2006-0342  
Application 09/944,893

Notwithstanding that the references fail to teach an active network, the applicants admit that the term active network describes a known network type. *See* Appendices B, C and D.

(Br. 9, last paragraph).

In addition, we find Tennenhouse specifically discloses the use of data encryption at page 3, left column, line 1. We note we have found *supra* that a more secure vehicle network would have been suggested to an artisan in accordance with the need to have a secure means of locking and unlocking electronic vehicle door and trunk latches. We have also found *supra* that Pogue's use of a symbol encoder and decoder at least suggests some form of data encryption. We note the Examiner has taken the motivation to modify Pogue directly from the Tennenhouse reference at page 1, left column, Introduction, second paragraph (*see* Answer 6).

We again note that under *DyStar*, the test is whether the ordinary artisan possesses knowledge and skills rendering him *capable* of combining the prior art references to realize a combination that is "stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient." *See* 464 F.3d at 1368, 80 USPQ2d at 1651. In the instant case, we find the ordinary artisan who possessed knowledge and skills relating to vehicle computer systems would have been *capable of* combining Pogue's vehicle network system with Tennenhouse's active network (and data encryption) in the manner suggested by the Examiner for the purpose of realizing a *more secure* and *reliable* vehicle network system.

Therefore, we conclude the Examiner has met the burden of establishing a *prima facie* case of obviousness. Accordingly, we will sustain

Appeal 2006-0342  
Application 09/944,893

the Examiner's rejection of representative claim 1 as being unpatentable over Pogue in view of Tennenhouse. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to claims 2-7, 9-12, and 15 on the basis of the selected claim alone. Therefore, we will sustain the Examiner's rejection of these claims as being unpatentable over Pogue in view of Tennenhouse for the same reasons discussed *supra* with respect to representative claim 1 (i.e., where claim 1 was found unpatentable over Pogue in view of Tennenhouse).

#### Dependent claims 8, 13, and 14

We consider next the Examiner's rejection of dependent claims 8, 13, and 14 as being unpatentable over the teachings of Pogue in view of Tennenhouse, and further in view of Daniels.

We see no deficiencies with respect to Pogue as modified by Tennenhouse, as discussed *supra*. We have also fully addressed Daniels *supra*. We note that Appellants have not presented any substantive arguments directed separately to the patentability of claims 8, 13, and 14. In the absence of a separate argument with respect to the dependent claims, those claims stand or fall with the representative independent claim. *See In re Young*, 927 F.2d at 590, 18 USPQ2d at 1091. Therefore, we will sustain the Examiner's rejection of these claims as being unpatentable over Pogue in view of Tennenhouse, and further in view of Daniels for the same reasons discussed *supra* with respect to the rejection of independent claims 1 and 11 as being unpatentable over Pogue in view of Tennenhouse.

Appeal 2006-0342  
Application 09/944,893

DECISION

In summary, we have sustained the Examiner's rejection of all claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-15 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).

AFFIRMED.

tdl/ce

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