REMARKS

In the latest Office Action, the Examiner rejected claims 1-4 and 9-11 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 6,650,622. Claims 1-5, 11, 13 and 14 were rejected under 35 USC 102(e) as being anticipated by De Bruycker et al (U.S. Patent No. 6,272,219). Claim 6 was rejected as being obvious under 35 USC 103(a) over De Bruycker, while claims 7, 8 and 12 were rejected as being obvious over the combination of De Bruycker in view of Williams (U.S. Patent No. 5,216,704). For the reasons set forth below, reconsideration of this application is respectfully requested.

Double Patenting

While Applicant makes no admission about the obviousness of the claims, a Terminal Disclaimer is being submitted herewith to render this objection moot.

Claim Rejections – 35 USC § 102

While De Bruycker can loosely be characterized as a network, it is not the type of network that includes dedicated cables to each piece of equipment on the network. De Bruycker is a telephone communication system in which a telephone company location 100 communicates with a customer premise 200 through a complex switching network, typically referred to as a PSTN (which stands for Public Switched Telephone Network).

Wikipedia explains the operation of a PSTN as follows:

Routing in the PSTN

From Wikipedia, the free encyclopedia

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In the context of the public switched telephone network, **routing** is the process by which telephone calls are routed around the telephone network. Telephone exchanges are connected together with trunks. Each call that is to be routed contains a destination number that has two parts, a prefix which generally identifies the geographical location of the destination telephone, and a number unique within that prefix that determines the precise destination.

The exchange uses pre-computed routing tables, which are generated by batch processing at central locations based on the known topology of the network, the numbering plan, and analysis of traffic data. These are then downloaded to telephone exchanges at intervals. **There may be several alternative routes to any given destination,** and the exchange can select dynamically between these in the event of link failure or congestion.

Because of the hierarchical nature of the numbering plan, and its geographical basis, most calls can be routed based only on their prefix. Exceptions include intelligent network services with non-geographical numbers, such as toll-free or freephone calling.

Routing in circuit-switched networks involves creating a path from one customer to another for the duration of each call. Routing decisions are an important part of this process as they determine which channels or circuits are used to connect the customers for the duration of the call. In a PSTN exchange, routing is typically performed using a routing table that contains the pre-defined routes for a connection. In such a system, alternative routes exist, which are specified in the routing tables [1].

In determining routing plans, special attention is paid for example to ensure that two routes do not mutually overflow to each other, otherwise congestion will cause a destination to be completely blocked.

According to Braess' paradox, the addition of a new, shorter, and lower cost route can lead to an increase overall congestion [1, 2]. The network planner must take this into account when designing routing paths.

One approach to routing involves the use of Dynamic Alternative Routing (DAR) [1]. DAR makes use of the distributed nature of a telecommunications network and its inherent randomness to dynamically determine optimal routing paths. This method generates a distributed, random, parallel computing platform that minimises congestion across the network,

and is able to adapt to take changing traffic patterns and demands into account [1]. (emphasis added)

Of particular importance is the statement that there may be "several alternative routes to a given destination". Thus, there is no one-to-one or dedicated physical cable wires that connect the telephone company location 100 to the customer premise 200. Since there are no dedicated cable wires, Applicant's technique for identifying equipment on a network by varying the electrical characteristics across the wires cannot be implemented in De Bruycker. This is because there simply are no dedicated wires in a telephone switching network.

Claim 1 has been amended for clarification purposes and should not be considered as narrowing the scope of the invention. Claim 1 clearly now calls for each piece of equipment to be connected to the central module by its own cable. For example, claim 1 calls for "a first cable having wires therein connected between the central module and the first piece of equipment". Claim 1 goes on to recite "a second cable having wires therein connected between the central module and the second piece of equipment." Claim 1 further recites that a remote module is utilized in generating "a variable impedance across at least a pair of wires in the first cable to define a first multi-bit signal associated with a first piece of equipment." In the preferred embodiment this multi-bit signal provides an identification signal uniquely associated with the first piece of equipment. A second piece of equipment can also be uniquely identified by "a second remote module utilized in generating a variable impedance across at least a pair of wires in the second cable to define a second multi-bit signal associated with the second piece of equipment". Thus, communication between the central module and

various pieces of equipment on the network can be implemented in an eloquently simple but effective manner. This structure and mode of operation is simply not disclosed or suggested by De Bruycker. Thus, the § 102 rejection should be removed.

Claim Rejections – 35 USC § 103

Claims 6-8 and 12 depend from claim 1. Thus, they are distinguishable at least for the reasons set forth above in connection with claim 1. In addition, the Examiner appears to be using an impermissible hindsight approach in which to reject these claims. For example, claim 6 not only calls for the central module to be able to identify the existence of the piece of equipment, it also calls for the central module to be able to identify the *location* of the equipment *without power being applied to the equipment*. This is not disclosed or suggested by De Bruycker. Claim 7 calls for the power demodulator in the remote module to demodulate the power signal "to detect information sent from the central module". Claim 7 further recites that "information can be bi-directionally transmitted between the central module and the remote modules." The additional reference to Williams (U.S. Patent No. 5,216,704) fails to disclose this structure or mode of operation. Williams' power sink 54 cannot be reasonably construed as a "power modulator". Even if it is a power demodulator it does not function in the manner recited in claim 7. Claim 8 further calls for the central module to block network information from being communicated to a piece of equipment that does not send the proper signal back to the central module. This recitation is not remotely suggested in any of the references cited by the Examiner.

Request for Interview

It is submitted that this amendment and response should place this application in condition for allowance and such action is respectfully requested. In the event that the Examiner does not issue a Notice of Allowance in the next communication, Applicant requests an interview to discuss this application before any other type of communication is issued.

For the foregoing reasons, it is believed that this application is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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