

**Claiming It All
By
John E. Hershey**

Sometimes inventors do not fully appreciate what they have invented. And sometimes potentially valuable protection is not seized from the start.

It's hard to say why this happens and perhaps there is no general answer. It could be that the inventor is so focused on invention and patenting a system that some of the less glamorous system components or methods are invented and ignored as mere stepping stones to get to the prize.

The good news is that there is a way to correct such an oversight. The bad news is that a certain amount of adverse exposure is still assumed by such an oversight.

A classic example of not recognizing all that had been invented can be seen in the patent pair US 5,119,104 "Location System Adapted for Use in Multipath Environments," issued June 2, 1992, and its reissue Re. 36,791, reissued July 25, 2000. In the first of these patents, the inventor envisioned a radiolocation system for tracking objects equipped with a "TAG" transmitter. The patent's abstract is given immediately below along with the patent's Figure 1b:

"A radiolocation system for multipath environments, such as for tracking objects in a semiconductor fabrication facility [10] (FIGS. 1a-1b), includes an array of receivers (20) distributed within the tracking area, coupled to a system processor (40) over a LAN. A TAG transmitter (30) located with each object transmits, at selected intervals, spread spectrum TAG transmissions including at least a unique TAG ID. In a high resolution embodiment, object location is accomplished by time-of-arrival (TOA) differentiation, with each receiver (FIG. 2b) including a TOA trigger circuit (64) for triggering on arrival of a TAG transmission, and a time base latching circuit (65) for latching the TOA count from an 800 MHz time base counter. In a low resolution embodiment, each receiver of the array is assigned a specific location-area, and receives TAG transmissions almost exclusively from TAGs located in that area, thereby eliminating the need for any time-of-arrival circuitry."

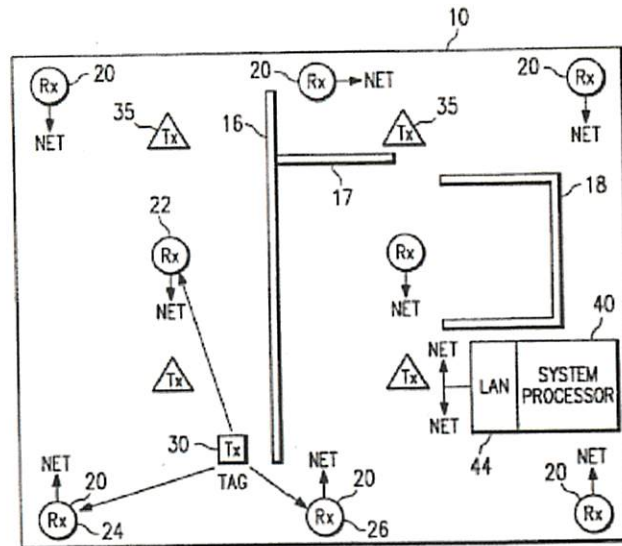


Figure 1 – US 5,119,104 Fig. 1-b

As described, the invention performs the utile function of locating TAGs with transmitters so that they can be tracked within an operational area. The claims speak to this. Let's look at claim 1:

"1. A location system for locating objects within a tracking environment using time-of-arrival differentiation for electromagnetic transmissions received at multiple receivers, comprising:

for each object, a TAG transmitter for transmitting, at selected intervals, TAG transmissions that include a unique TAG ID;

an array of receivers distributed within the tracking environment such that a TAG transmission is received by at least three receivers;

each receiver including a time-of-arrival circuit and a data communications controller;

the time-of-arrival circuit is responsive to the arrival of a TAG transmission for providing a TOA count corresponding to the time-of-arrival of the most direct path for such TAG transmission, with the TOA count being synchronized to a system synchronization clock provided to each receiver;

the data communications controller is responsive to the receipt of a TAG transmission for providing a corresponding TOA-detection packet that includes the associated TAG ID and TOA count; and

a location processor for receiving the TOA detection packets, and for determining the location of each TAG, and its associated object, from at least three corresponding TOA-detection packets received from different receivers.”

So, according to claim 1, a TAG transmits “at selected intervals.” Is that all there is to initiating TAG transmissions or is there more? Let’s look at what’s taught in the specification. At our point of interest the inventor teaches according to the patent’s Figure 2a which is reproduced below as our Figure 2.

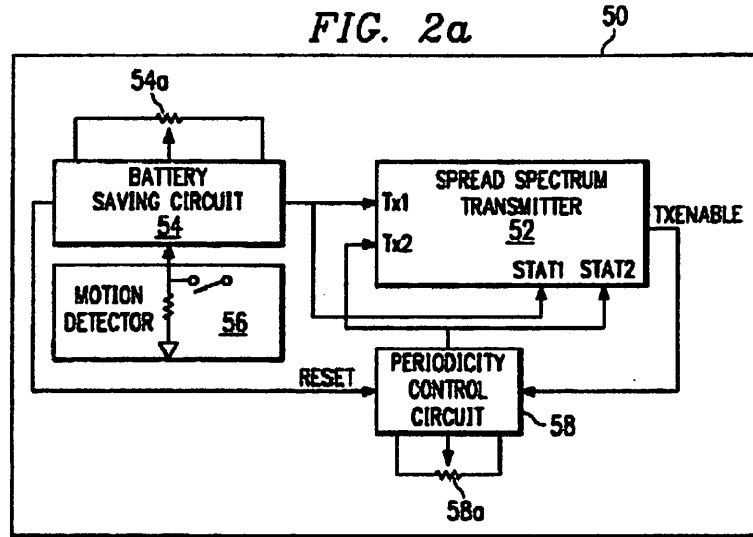


Figure 2 - US 5,119,104 Fig. 2-a

On p. 6, lines 18-46, we find:

“To conserve power and to increase the available population of TAG transmitters, each spread spectrum transmitter 52 is normally in a power-saver mode, being enabled for transmission by battery saving circuit 54 only while its associated object is being moved to a new location. Object motion is detected by motion detector 56, which provides an appropriate indication to the battery saving circuit.

In response to a motion indication, battery saving circuit 54 initiates a transmit mode by enabling spread spectrum transmitter 52 for an initial TAG transmission. The TX-packet in this initial TAG transmission includes, in addition to the TAG ID, a Motion Initiated status.

While the object remains in motion (as detected by motion detector 56), periodicity control 58 causes spread spectrum transmitter 52 to

re-transmit TAG transmissions at selected intervals (such as every 15 seconds). The TX-packets in these periodic TAG re-transmissions include, in addition to the TAG ID, a Motion Continuing status.

When the object arrives at its new location and becomes stationary, motion detector 56 stops providing an object motion indication to battery saving circuit 54. After a predetermined period in which the object is stationary (such as 30 seconds), the battery saving circuit disables periodicity control 58, and causes the spread spectrum transmitter to transmit a final TAG transmission with a TX-packet including a Motion Stopped status. "

Coupling a motion detector with a transmitter is a neat idea but it wasn't claimed. Could this still be a patentable teaching? The inventor came to believe so and sought protection through a broadening reissue. An application for a broadening reissue must be filed within two years of the date of issue of the original patent and this was done on June 2, 1994, two years to the day.

In application seeking reissue, the applicant must fulfill Patent Rule 1.175(a) which states:

1.175 Reissue oath or declaration*

(a) The reissue oath or declaration ... must also state that:
(1) The applicant believes the original patent to be wholly or partly inoperative or invalid by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than the patentee had the right to claim in the patent, stating at least one error being relied upon as the basis for reissue; and
(2) All errors being corrected in the reissue application up to the time of filing of the oath or declaration under this paragraph arose without any deceptive intention on the part of the applicant.

Going through the **First Amended Reissue Application Declaration** in the file wrapper for Re. 36,791 we find that the patentee did indeed declare in part:

"I believe the original patent to be wholly or partly inoperative or invalid by reason that I claimed less than I had a right to claim in the patent - that is, I failed to claim novel features of the invention broadly enough. The reason why I believe this is because in my patent, I did not broadly claim a transmitter alone that transmits the

* This rule was changed effective December 1, 1997. The old rule required the patentee to provide details about *each* error's nature and how the errors came about.

response to motion and periodically transmits in response to a lack of motion."

The reissue application was eventually successful and issued as US Patent Re. 36,791. The first of the newly allowed claims, claim 55, reads:

"A transmitter including:

transmitter circuitry for transmitting information; and

a motion detection circuit for detecting motion and lack of motion of the transmitter, said motion detection circuit enabling the transmit circuitry to transmit information at first selected intervals when the transmitter is in motion and enabling the transmit circuitry to transmit information periodically at second selected intervals in response to detecting lack of motion,

wherein said second selected intervals are at a low duty cycle relative to said first selected intervals."

Although a reissue may gain what was not effectively claimed, the patentee may incur some loss through the mechanism of **Intervening Rights**. 35USC252 speaks to the "Effect of reissue" as follows:

"The surrender of the original patent shall take effect upon the issue of the reissued patent, and every reissued patent shall have the same effect and operation in law, on the trial of actions for causes thereafter arising, as if the same had been originally granted in such amended form, but in so far as the claims of the original and reissued patents are identical, such surrender shall not affect any action then pending nor abate any cause of action then existing, and the reissued patent, to the extent that its claims are identical with the original patent, shall constitute a continuation thereof and have effect continuously from the date of the original patent.

A reissued patent shall not abridge or affect the right of any person or that person's successors in business who, prior to the grant of a reissue, made, purchased, offered to sell, or used within the United States, or imported into the United States, anything patented by the reissued patent, to continue the use of, to offer to sell, or to sell to others to be used, offered for sale, or sold, the specific thing so made, purchased, offered for sale, used, or imported unless the making, using, offering for sale, or selling of such thing infringes a valid claim of the reissued patent which was in the original patent.

*The issue of Intervening Rights is an important consideration in reissue, reexamination, and in some cases of late payment of maintenance fees.

The court before which such matter is in question may provide for the continued manufacture, use, offer for sale, or sale of the thing made, purchased, offered for sale, used, or imported as specified, or for the manufacture, use, offer for sale, or sale in the United States of which substantial preparation was made before the grant of the reissue, and the court may also provide for the continued practice of any process patented by the reissue that is practiced, or for the practice of which substantial preparation was made, before the grant of the reissue, to the extent and under such terms as the court deems equitable for the protection of investments made or business commenced before the grant of the reissue.”

Exercise

- Are your inventors sensitized to specifically point out to a patent preparer all that they believe to be novel in their overall invention?
- Select a system’s patent from your company’s patent portfolio and review it to see if there might be items that were not specifically claimed but might have deserved protection. Compile a list of these and then schedule a meeting with the inventors to discuss.
- Does your company have a formal procedure to review all issued patents well before their two year issuing anniversary to see if a broadening reissue might be appropriate? If not, should it have such a procedure? Defend the answer.