

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

UNILOC 2017 LLC,

Plaintiff,

v.

MOTOROLA MOBILITY, LLC,

Defendant.

Civil Action No. 1:18-cv-01840-RGA

AMENDED COMPLAINT

Plaintiff, Uniloc 2017 LLC (“Uniloc”), for its Amended Complaint against defendant, Motorola Mobility, LLC (“Motorola”), alleges:

THE PARTIES

1. Uniloc 2017 LLC is a Delaware limited liability company.
2. Motorola is a Delaware corporation.

JURISDICTION

3. Uniloc brings this action for patent infringement under the patent laws of the United States, 35 U.S.C. § 271, *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

CLAIM FOR PATENT INFRINGEMENT

4. Uniloc is the owner, by assignment, of U.S. Patent No. 6,993,049 (“the ’049 Patent”), entitled COMMUNICATION SYSTEM, which issued January 31, 2006, on an application claiming priority to June 26, 2000. A copy of the ’049 Patent was attached as Exhibit A to the original Complaint in this case.

5. The '049 Patent describes in detail, and claims in various ways, inventions in systems and devices developed by Koninklijke Philips Electronics N.V. for improved communication of data using polling of secondary devices by a primary device.

6. The '049 Patent describes problems and shortcomings in the then-existing field of communications between devices and describes and claims novel and inventive technological improvements and solutions to those problems and shortcomings.

7. The written description of the '049 Patent describes in technical detail each of the limitations of the claims, allowing a person of ordinary skill in the art to understand what the limitations cover and how the combination of claim elements differed markedly from and improved upon what may have been considered conventional or generic.

8. The '049 patent relates to an improved communication system allowing devices to interact over short range wireless links, thereby avoiding the need for extensive cabling. '049 Patent at 1:9-11. The problem it addressed was the need to minimize power consumption of battery-powered devices on an ad hoc network while simultaneously maintaining a high degree of responsiveness between the devices. Although the wireless transceiver circuitry in prior art battery-powered devices could be powered down during periods of inactivity to reduce consumption, the time needed to reactivate them and rejoin the network “could be several tens of seconds.” '049 Patent at 1:58-61. That degree of latency was unsatisfactory for an input device such as a keyboard, mouse, game controller, or graphics pad (referred to in the patent as a human/machine interface device (HID)).

9. The '049 patent described, as one embodiment, introducing the invention in the context of a Bluetooth ad hoc network, circa 2000, which at the time involved the formation of a Bluetooth *piconet*. In that network, a host device (*master*) broadcasts an *inquiry message* every

10ms and then listens for a reply from a nearby portable device (*slave*), such as an HID, that is listening for an inquiry message. If the host device receives a reply, it then *pages* the portable device, inviting it to join the piconet.

10. Because maintaining an active status on the piconet requires considerable power consumption, during inactive periods an HID would enter a *parked* status, temporarily suspending its connection to the piconet. But, as described above, rejoining the piconet to transfer data took too long, and required significant power.

11. The inventor solved this problem by designing a Bluetooth system in which inquiry messages can be modified as needed to include an extra data field capable of polling an HID independent of a piconet connection. The extra data field carried the address of the HID being polled. In the patented system, the HID was able to recognize it had been polled from the addition of the field together with its address, and would only respond to the poll if it had data to transmit. A special access code can also be included in the header of the modified inquiry message for signaling to an HID that a poll is forthcoming. All the claims include the limitation: “means are provided for . . . adding to each inquiry message prior to transmission an additional data field for polling at least one secondary station.” The specification describes various structures the claims incorporate that correspond to this function:

4:15-21 - “*The applicants have recognised that it is possible to **piggy-back a broadcast channel on the inquiry messages** issued by the master 100. The broadcast channel can be used to poll HIDs at regular intervals. However, at the air interface, the **mechanism is entirely compatible with conventional Bluetooth systems.**”*

4:59-64 - “*As mentioned above and shown in FIG. 5, the applicants propose that the inquiry messages issued by the base station have an **extra field 504 appended to them**, capable of carrying a HID poll message. The extended field 504 **may carry a header that signifies a HID poll** to distinguish it from other applications of extended field information . . .”*

5:2-9 - *“It will also carry the address of the HID being polled, and may also carry a small amount of information to the HID which might be used to provide supplementary information to a user (such as text on an LCD screen) or feedback (for example, motional feedback in games controllers).”*

12. Claim 1 also includes the limitation: “means are provided for determining when an additional data field has been added . . . for determining whether it has been polled from the additional data field and for responding to a poll when it has data for transmission.” Again, the specification describes the various structures the claims incorporate, corresponding to this function:

5:9-11 - *“In addition, by using a special DIAC to signify a HID poll, HID devices can be alerted to the presence of the forthcoming poll . . .”*

5:36-40 - *“In order to achieve the desired responsiveness, and because the HID has been specifically addressed, the HID is allowed to respond, if desired, in the next-but-one half-slot with a packet of similar format, containing information corresponding to the user’s input.”*

6:7-9 - *“In order to minimise their power consumption, HIDs are not obliged to respond to every poll if they have no information to offer.”*

6:16-24 - *“. . . at step 602, when the HID has data to transmit to the host system. The HID receives, at step 604, data from the extra field 504 then tests, at step 606, whether it has been polled by the host system. If it has not been polled, the HID returns to step 604 to receive the next extra field 504. If the HID has been polled, it transmits its data in the next-but-one half-slot, at step 608.”*

13. Substantial advantages flow from these claim limitations. Existing Bluetooth “inquiry” messaging involved entering “inquiry scan” and “inquiry response” states at various predetermined times with the goal of establishing a “piconet” between a primary station and secondary stations. No application or user level data was exchanged during this process, as it was strictly used to setup a persistent connection. Existing inquiry messages were not previously used to “broadcast” application/user-level information such as text on an LCD screen (compare 1:52-58; 4:48-58 [describing an inquiry procedure] to 5:2-6 [describing the “supplemental

information” that can be carried in the additional data field not normally present in an inquiry message]). Thus, the invention allows for “additional data” including application-level data to be appended to an inquiry message, which can be used to poll a secondary station.

14. The exchange of supplemental information between Bluetooth devices was not possible using existing inquiry messages. The inventor recognized conventional inquiry messages were still important for using Bluetooth functionality, so the proposed solution involved “piggy-backing” the extra field onto the existing inquiry message structure in a way that allowed the stations to continue using inquiry messaging when needed (*see, e.g.*, 4:19-20; 6:55-56). Thus, the invention both (1) enabled additional data such as LCD screen text to be appended to inquiry messages, and (2) preserved interoperability with Bluetooth functionality by “appending” to the inquiry message format instead of changing it from the ground up.

15. The specification explains there are various techniques that can be used to alert the secondary station it is being polled. For example, a special DIAC code can be used in the header to signify the presence of the additional data field (*see, e.g.*, 5:9-11). An address of the secondary station can further be included in the additional data field to signal to a secondary station it is the intended recipient (*see, e.g.*, 5:36-40). Thus, using a combination of the information contained in the message header and the additional data field, a secondary station can determine that it has been “polled.” The specification further explains polling does not necessarily require the polled secondary station to respond, as in some instances the poll will be used to communicate useful information without requiring a response (*see, e.g.*, 6:7-9).

16. None of the claimed polling and responding to a poll functionality was previously possible because it depended upon the inclusion of the additional data field functionality discussed above, which is novel in its own right. The inventor explained this arrangement

provided benefits such as: (1) reducing secondary station power consumption since the station is not required to respond to a poll unless it has data to report (*see, e.g.*, 6:7-9); (2) increasing the responsiveness/speed at which polling can occur relative to existing Bluetooth (which required a full piconet to be established or a parked slave to be un-parked before application-level information can be exchanged and the associated delay can be on the order of tens of seconds to minutes) (*see, e.g.*, 2:4-21); and (3) preserving interoperability with Bluetooth procedures as discussed above (*see, e.g.*, 4:19-20).

17. Thus, the claimed advance is best described as “reducing latency in an ad hoc network by the specific means of adding to an inquiry message an additional data field for polling a secondary station and enabling the secondary device to recognize, from that data field, whether it has been polled and to respond to a poll when it has data for transmission.”

18. This description of the claimed advance is supported by the language of the claims; by statements in the patent itself, such as contained in the portions referred to above; and by the prosecution history.

19. Motorola imports, uses, offers for sale, and sells in the United States electronic devices that utilize Bluetooth Low Energy version 4.0 and above (“Bluetooth LE”), including those identified in Exhibit B to this Amended Complaint (collectively, “Accused Infringing Devices”).

20. The Accused Infringing Devices are electronic devices that implement communications systems where a first or primary device broadcasts messages including data to a second or secondary device to poll the second or secondary device that may respond to the first device when the second device has data to transmit to the first device.

21. Motorola has infringed, and continues to infringe, claims of the '049 Patent by making, using, offering for sale, selling, and importing the Accused Infringing Devices. For example, as set forth in Exhibit C to this Amended Complaint, the Accused Infringing Devices incorporate each limitation of claim 1.

22. Motorola knowingly incorporates into the Accused Infringing Devices components and software that enable the devices to operate automatically as described above to infringe the '049 Patent and knows and intends that its customers use the Accused Infringing Devices in a manner that infringes.

23. In its marketing, promotional, and instructional materials, such as, for example, the attached Exhibit D, Motorola intentionally instructs its customers to use the Accused Infringing Devices in a manner that causes the devices to send and receive data packets in accordance with Bluetooth Low Energy version 4.0 and above functionality.

24. Motorola has infringed, and continues to infringe, the '049 Patent by actively inducing others to use, offer for sale, and sell the Accused Infringing Devices. Motorola's customers who use those devices in accordance with Motorola's instructions infringe the '049 Patent.

25. Motorola has also infringed, and continues to infringe, the '049 patent by offering to sell, selling, and importing the Accused Infringing Devices, which devices are used in practicing the methods, or using the systems, of the '049 patent, and constitute a material part of the inventions. Motorola knows portions of software used in the Accused Infringing Devices: are especially written or especially adapted for use as described above in what Motorola now knows to be infringement of the '049 patent; are not staple articles or commodities of commerce; and are not suitable for substantial non-infringing use.

26. Motorola will have been on notice of the '049 Patent since, at the latest, the service of the original complaint upon it in. By the time of trial, Motorola will have known and intended (since receiving such notice) that its continued actions would actively induce and contribute to the infringement of the '049 Patent by others, including its customers. Motorola has also been on notice of Uniloc's infringement allegations and theory of infringement since that date, and thus will have known that its continued actions would induce and contribute to the infringement of claims of the '049 Patent. Despite that, and as further evidence of its intent, Motorola has refused to discontinue its infringing acts and has also induced infringement by failing to remove or distinguish infringing features of the Accused Infringing Devices or otherwise place a non-infringing limit on their use.

27. By the time of trial, Motorola will have known and intended (since receiving such notice) that its continued actions would actively induce and contribute to the infringement of the '049 Patent by its customers.

28. Motorola may have infringed the '049 Patent through other software and devices utilizing the same or reasonably similar functionality, including other versions of the Accused Infringing Devices.

29. Uniloc has been damaged by Motorola's infringement of the '049 Patent.

PRAYER FOR RELIEF

Uniloc requests that the Court enter judgment against Motorola:

- (A) declaring that Motorola has infringed the '049 Patent;
- (B) awarding Uniloc its damages suffered as a result of Motorola's infringement of the '049 Patent;
- (C) awarding Uniloc its costs, attorneys' fees, expenses, and interest, and

(D) granting Uniloc such further relief as the Court finds appropriate.

Date: March 12, 2019

Respectfully submitted,

/s/ Sean T. O'Kelly

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