

Roku, Inc.
v.
Ecolink Intelligent Technology, Inc.

IPR2023-00792 (US 10,692,340)

PATENT OWNER'S DEMONSTRATIVE EXHIBIT

Contents

- **Claim Construction**

- “timed alarm signal”
- “first alarm signal”
- “immediate alarm signal”

- **Petitioner has failed to prove that the Challenged Claims of the ‘340 patent are obvious**

- Lamb in view of Williams fails to disclose, teach, or suggest a “timed alarm signal,” a “first alarm signal,” and an “immediate alarm signal”
- No motivation to modify Lamb in view of Williams
- Petitioner has failed to show that Lamb qualifies as prior art
- Sharma, alone, fails to disclose, teach, or suggest a “timed alarm signal”

Claim Construction

Challenged Claims 1 and 11

1. A barrier alarm device, comprising:
 - a barrier status detection device for indicating that a barrier monitored by the barrier alarm device has been opened;
 - a human detection device for indicating that a human being is inside a premises in proximity to the barrier;
 - a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel, the timed alarm signal for initiating a timer associated with the security panel;
 - a memory having processor-executable instructions stored thereon; and
 - a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to:
 - respond to the barrier status detection device indicating that the barrier has been opened by determining whether the human detection device indicates that the human being is inside the premises in proximity to the barrier; and
 - transmit, via the transmitter, the timed alarm signal to the receiver only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier.

EX1001 at claim 1; *id.* at claim 11

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Patent Owner's Construction of "timed alarm signal"

The Board Should Hold That Each Of A Bypass Signal And A Signal That Causes An Alarm System To Be Disarmed Is Not The "timed alarm signal" Or "first alarm signal."

ises or, conversely, when a door or window is opened and no person is detected outside the door or window, no alarm signal is transmitted to central security panel 116. In another embodiment, a bypass signal is sent to central security panel 116 when it is determined that an authorized person has opened a door or a window, the bypass signal is an instruction to central the remote location 116 to ignore future alarm signals generated by the barrier alarm device or to disarm the system.

EX1001 at 8:18-26

barrier alarm that monitors a primary entry door. The timed alarm signal allows an authorized user to open a monitored door, whereupon a countdown timer is generally started by central security panel 116, giving the person a fixed time period in which to cancel a security response by central security panel 116. To cancel the security response, an

EX1001 at 6:5-10

POR at 24-27; Sur-Reply at 7

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Petitioner's Construction of "timed alarm signal"

"a signal in an alarm system for initiating a timer associated with the security panel"

1. A barrier alarm device, comprising:
 - a barrier status detection device for indicating that a barrier monitored by the barrier alarm device has been opened;
 - a human detection device for indicating that a human being is inside a premises in proximity to the barrier;
 - a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel, the timed alarm signal for initiating a timer associated with the security panel;

Reply at 4-5

Challenged Claims 6 and 16

6. A central security panel, comprising:
a communication interface for receiving signals from a barrier alarm device;
a memory for storing processor-executable instructions;
and
a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel to:
receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened;
respond to the first alarm signal by determining whether a human being has been indicated to be inside the premises and in proximity to the barrier;
begin a measuring of an elapsed time from when the first alarm signal was received when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;
determine whether the elapsed time has exceeded a predetermined time;
generate a security response when it is determined that the elapsed time has exceeded the predetermined time; and
provide the generated security response to a receiver via the communication interface.

EX1001 at claim 6; *id.* at claim 16

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Patent Owner's Construction of "first alarm signal"

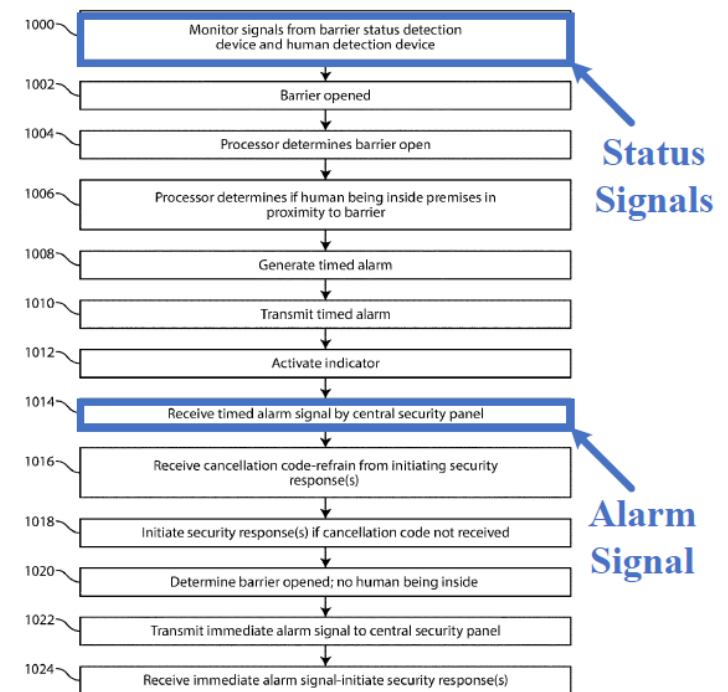
The Board Should Hold That A Status Signal Is Not The "timed alarm signal" Or "first alarm signal."

In another embodiment, barrier alarm device 106 does not make determinations as to when to transmit an alarm signal and/or a bypass signal. Instead, processor 300 monitors barrier status determination device 306 and human detection device 304 and transmits a barrier status signal and a human status signal, respectively, to gateway 402, central security panel 116, or both, when a change in state of one or both devices occurs. Remote server 400 and/or central security

EX1001 at 11:33-40

POR at 18-24; Sur-Reply at 4-7

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE



EX1001 at FIG. 10 (annotated)

Petitioner's Construction of "first alarm signal"

"raw input of a barrier alarm device indicative of a barrier being opened"

6. A central security panel, comprising:
a communication interface for receiving signals from a barrier alarm device;
a memory for storing processor-executable instructions;
and
a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel to:
receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened;

Reply at 9; *id.* at 1, 7-8

Challenged Claims 2 and 12

2. The barrier alarm of claim 1, wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to transmit, via the transmitter, an immediate alarm signal to the receiver for causing a security response to be initiated when it is determined that the human detection device does not indicate that the human being is inside the premises in proximity to the barrier.

EX1001 at claim 2; *id.* at claim 12

Undisputed: plain meaning of “immediate alarm signal”

B. “immediate alarm signal.”

Claims 2 and 12 each recite transmitting “an immediate alarm signal.” (EX1001, claims 2, 12.) In view of the specification and the Claims, the plain and ordinary meaning of the term “immediate alarm signal” is an alarm signal that instructs the security panel to initiate a security response *immediately*. (Id., 17:46-

POR at 28-30; Sur-Reply at 7-8;
Reply at 4-9

Petitioner's Invalidity Grounds

Invalidity Grounds

Ground	Statute	Claim(s)	Prior Art
1	§103	1-2, 6, 11-12, 16	Lamb in view of Williams
2		1, 11	Sharma

Petition at 9

Summary of Parties' Disputes

- Lamb in view of Williams fails to disclose, teach, or suggest a “timed alarm signal”
- Lamb in view of Williams fails to disclose, teach, or suggest a “first alarm signal”
- Lamb in view of Williams fails to disclose, teach, or suggest “determine whether the elapsed time has exceeded a predetermined time”
- Lamb in view of Williams fails to disclose, teach, or suggest an “immediate alarm signal”
- No motivation to modify Lamb in view of Williams
- Whether Petitioner can prove that Lamb is prior art to the '340 patent
- Sharma, alone, fails to disclose, teach, or suggest a “timed alarm signal”

Dispute #1: Lamb in view of Williams fails to disclose, teach, or suggest a “timed alarm signal”
[claims 1 and 11]

Petitioner's Theory: Lamb's "bypass signal" starts a timer

Lamb discloses the processor executing the processor-executable instructions to cause the barrier alarm device to (e.g., see [1.e]) transmit, via the transmitter, a signal to the receiver (e.g., transmit to the receiver associated with central security panel 116 (see [1.c]), a bypass signal) only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier (e.g., "when [the] barrier alarm device detects ... that a human being is inside the premises being monitored in proximity to the barrier").

As explained in §VIII.A.1, **Lamb** discloses a system, including a **barrier alarm device** that, in response to determining that a **barrier** has been opened and a person is inside the premises, transmits a "bypass signal" to **central security panel**

Petition at 17, 39

failed claim construction argument about "alarm." See Section IV.B. The ground PO ignores is simple: There is a control signal sent by **Lamb**. Pet., 25-29.

Williams teaches a control signal to start a timer. Pet., 29-34. PO doesn't dispute either. POR, 33-35. The ground modifies the **Lamb** control signal to start a timer, as taught by **Williams**. Pet., 28-29. PO does not address the actual IPR ground.

signals irrelevant to the ground. Whether or not **Williams** contemplates status signals distinct from alarm signals (POR, 33-34), the ground is based on **Lamb's** control signal.

Reply at 14-15

Dispute #2: Lamb in view of Williams fails to disclose, teach, or suggest a “first alarm signal”
[claims 6 and 16]

Petitioner's Theory: Lamb transmits a “barrier status signal”

Lamb discloses that **barrier detection device 306** of the **barrier alarm device** monitors and detects whether a barrier has been opened. *See* [1.a]. If a barrier has been opened, then the **barrier alarm device** “transmits a barrier status signal to ... central security panel 116 ... indicative of the barrier being opened.” Lamb, [0043]; McNair, ¶¶104-106.

Petition at 46-47

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Lamb's Disclosure Regarding “barrier status signal”

[0043] In another embodiment, barrier alarm device **106** does not make determinations as to when to transmit an alarm signal and/or a bypass signal. Instead, processor 300 monitors barrier status determination device 306 and human detection device 304 and transmits a barrier status signal and a human status signal, respectively, to gateway 402, central security panel 116, or both, when a change in state of one or both devices occurs. Remote server 400 and/or central security panel 116 receives these status signals and determines whether a local alarm condition exists and whether to transmit an alarm signal to one or more remote devices 406 of inter-

EX1009 at [0043]; *see also*
id. at claim 19; POR at 36

Dispute #3: Lamb in view of Williams fails to disclose, teach, or suggest “determine whether the elapsed time has exceeded a predetermined time”
[claim 6]

Claim 6 vs. Claim 16

Claim 6

begin a measuring of an elapsed time from when the first alarm signal was received when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;
determine whether the elapsed time has exceeded a predetermined time;
generate a security response when it is determined that the elapsed time has exceeded the predetermined time; and

EX1001 at claim 6

Claim 16

starting a countdown timer when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;
determining whether the countdown timer has expired;
in response to determining that the countdown timer has expired, generating a security response; and

EX1001 at claim 16

The Petition's Analysis for Claims 6 and 16

Claim 6

As discussed for [6.f], **Lamb** in view of **Williams** renders obvious that the **central security panel** initializes a timer that, upon expiration, sets an alarm. **Williams** discloses that a “time-out of the timer” or “timer timeout” is determined. McNair, ¶¶117-119.

Petition at 51

Claim 16

Lamb discloses a central security panel configured to perform a method including the same steps claimed in [16.a]-[16.f]. See [6.pre]-[6.i]. **Lamb** therefore discloses, or renders obvious in view of **Williams**, [16.a]-[16.f] for the same reasons discussed in [6.d]-[6.i], respectively. McNair, ¶¶144-168.

Petition at 55

Dispute #4: Lamb in view of Williams fails to disclose, teach, or suggest an “immediate alarm signal”
[claims 2 and 12]

The Petition's Analysis of "immediate alarm signal"

"immediate alarm signal" = "an alarm signal that instructs the security panel to initiate a security response *immediately*"
(POR at 28-30; Reply at 4-9; Sur-Reply at 7-8)

to the door. Lamb, [0037], [0041], [0051]-[0053]. **Lamb** discloses that **processor 300** interprets these detections as an indication that an "unauthorized person" has opened the barrier and sends an "alarm signal" to **central security panel 116**, causing it to, e.g., trigger a siren or contact the authorities. McNair, ¶90.

Petition at 42-44

Dispute #5: No motivation to modify
Lamb in view of Williams
[All Challenged Claims]

Motivation to Combine/Modify Law

It is well-settled that “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The petitioner must demonstrate that a POSITA would have been motivated to pick out the references relied upon and combine them in the manner claimed. *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017). It is not enough to merely show that a POSITA, “once presented with the two references, would have understood that they *could* be combined.” *Id.* at 993 (emphasis in original).

POR at 41-42

Motivation to Combine/Modify Law (cont.)

“Fundamental differences between the references are central to [the] motivation to combine inquiry.” *Adidas AG v. Nike, Inc.*, 963 F.3d 1355, 1359-60 (Fed. Cir. 2020) (affirming finding of no motivation to combine where petitioner failed to reconcile references’ “fundamental differences in seaming techniques”). A proposed modification is inappropriate when the modification would change a prior art reference’s basic principle of operation or would frustrate the prior art reference’s intended purpose. *Plas-Pak Industries, Inc. v. Sulzer Mixpac AG*, 600 Fed. Appx. 755, 758-59 (Fed. Cir. 2015). When assessing motivation to combine, “the benefits, both lost and gained, should be weighed against one another.” *See Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 & n.8 (Fed. Cir. 2000).

POR at 42

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Petitioner's Proposed Modifications to Lamb

- Modifying Lamb's security panel to initialize a countdown timer. (Petition at 28, 49, 51-53; Reply at 14-15.)

Petitioner's Sole Reason for Combining Lamb with Williams

- To “enhance security” by verifying that a potential alarm is indeed caused by an authorized person, and not an unauthorized person. (Petition at 17-18, 28, 41, 49 (citing EX1010 at 2:35-38).)

Drawbacks Far Outweigh Any Alleged Benefit

SIGNIFICANT DRAWBACKS

- User must carry around personal device when inside premises while system is armed, which is highly inconvenient. (EX2003, ¶ 134.)
- False alarms if personal device is broken, malfunctioning, or forgotten; security risk if personal device is stolen. (*Id.*, ¶¶ 135-136.)
- Severe technical and practical deficiencies irrespective of the technical solution used for the personal device. (*Id.*, ¶¶ 138-146.)

Drawbacks Far Outweigh Any Alleged Benefit (cont.)

NO EVIDENCE OF ANY BENEFIT

- No evidence regarding how much the proposed modifications would allegedly “enhance security” in Lamb, if at all. (Petition at 18.)
- Williams does not purport to improve Lamb-type systems. (EX2003, ¶ 129; EX1010 at 1:13-53; EX1009 at Abstract.)
- Both Lamb and Williams are making assumptions; no explanation why Lamb’s assumption is unreasonable. (EX2003, ¶¶ 130-132.)

Petitioner's Attorney-Only Reply Argument

Regardless, a POSA would perceive advantages to remote controls.

Reply at 19 (Petitioner failing to cite to the testimony of a POSITA)

- Williams does not disclose a remote control. (*See generally* EX1010; *see also* Sur-Reply at 20.)
- Lamb's system already eliminates the need for users to walk to the control panel to disarm the system. (POR at 10; Sur-Reply at 21.)

Undisputed: POSITA would have eliminated human detection device if Lamb and Williams were combined

Therefore, in Petitioner's proposed modifications to Lamb, Lamb's human detection device and Lamb's step of determining whether a human being is inside the premises in proximity to the barrier are rendered *superfluous, redundant, and unnecessary*, as the "device configured to transmit an authentication code" performs the same function of verifying that an authorized person has opened a barrier in an allegedly better way. (EX2003, ¶ 116.)

Assuming a POSITA would have been motivated to modify Lamb in view of Williams in the first place, a POSITA would have *eliminated* Lamb's superfluous, redundant, and unnecessary human detection device and step of determining whether a human being is inside the premises in proximity to the barrier. (*Id.*, ¶ 117.) By doing so, a POSITA would have significantly reduced the cost, complexity, and processing requirements of Lamb's modified system while providing practically the same functionality as Lamb's unmodified system. (*Id.*)

POR at 44-47; *see also* EX2003, ¶¶ 113-118; Reply at 17-19

Undisputed: No explanation why goal of “enhancing security” would have specifically led to “initiating a countdown timer”

Williams also discloses several alternatives to transmitting a signal from a motion detector to a security panel that causes a timer in the security panel to be initiated. (EX2003, ¶¶ 122-124.) Williams discloses that each motion detector may itself interrogate the “personal device” and initiate its own timer whenever motion is detected. (EX1010, FIG. 2, 1:54-67, 3:24-26, 3:67-4:3.) Williams also discloses that, rather than transmitting a signal from a motion detector that causes a timer to be initiated, the “personal device” can instead transmit an authorization code periodically to bypass the motion detectors. (*Id.*, Abstract, 2:3-8, 2:25-34, 6:23-53, 7:59-63, 8:21-39.) In this embodiment, the transmission of an authorization code from the “personal device”—not a signal from a motion detector—causes a timer to be initiated. (*Id.*)

Petitioner does not explain why the goal of verifying that a potential alarm is caused by an authorized person—a goal that each of Williams’ embodiments allegedly accomplishes—would have led a POSITA to select the particular embodiment that Petitioner has applied to Lamb. (EX2003, ¶ 125.) Williams discloses that the embodiment where the “personal device” periodically transmits an authorization code is “much simpler,” yet Petitioner completely ignores this embodiment. (*Id.*; EX1010, 6:23-26, 7:64-65, 8:33-39.)

POR at 47-49; *see also* Reply at 20;
Sur-Reply at 18-19

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Undisputed: Proposed modifications would change Lamb's basic principle of operation

First, the proposed modifications would change Lamb from a system that operates on the principle that motion detected inside a premises is indicative of an *authorized* person to a system that operates on the principle that motion detected inside the premises is indicative of an *unauthorized* person. (EX1009, [0018], [0029]; EX1010, 1:54-2:10, 2:25-34, 3:9-38; EX2003, ¶ 162.)

Second, the proposed modifications would change Lamb's system from one where the user does not need to do anything to prevent false alarms to one where the user must carry or wear "a device configured to transmit an authentication code" (*i.e.*, Williams' user-worn "personal device") to prevent false alarms. (EX2003, ¶ 163.)

POR at 56-58; *see also* EX2003, ¶¶ 159-164; Reply at 21

Undisputed: Proposed modifications would frustrate Lamb's intended purpose

In the proposed modifications to Lamb, however, the user must have in his or her possession “a device configured to transmit an authentication code” (*i.e.*, Williams’ user-worn “personal device”) to prevent false alarms. (Petition, 17-19; EX1010, 1:54-2:10, 2:25-34.) A POSITA would have recognized that introducing “a device configured to transmit an authentication code” (*i.e.*, Williams’ user-worn “personal device”) into Lamb would *increase* the number of false alarms because a false alarm would occur, for example, every time the user forgets the “personal device,” or if the “personal device” runs out of battery, breaks, or is lost/misplaced. (EX2003, ¶ 167.) Again, no such issues exist in Lamb’s (unmodified) system because the user of Lamb’s system does not need to do anything to prevent false alarms. (*Id.*) Thus, the proposed modifications would frustrate Lamb’s intended purpose of reducing the occurrences of false alarms. (*Id.*)

POR at 58-59; *see also* EX2003, ¶¶ 166-167; Reply at 21

Undisputed: Lamb and Williams have significant, fundamental differences that are unaccounted for

A POSITA would not have been motivated to modify Lamb in view of Williams in view of the references' significant, fundamental differences. (POR at 8-11, 59-60.) Petitioner *does not dispute* that Lamb and Williams have significant, fundamental differences. (Reply at 18.) Instead, Petitioner argues that Lamb's and Williams' differences are irrelevant because "Lamb and Williams are undisputed analogous art." (*Id.*) Petitioner's argument misses the point. The question of whether prior art references qualify as analogous art is a separate issue from whether there is a motivation to combine those references. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1237–39 (Fed. Cir. 2010).

POR at 59-60; Sur-Reply at 22;
Reply at 18

Dispute #6: Lamb is Not Prior Art to Claims 1, 2, 11, and 12 if the Board Adopts Petitioner's Proposed Construction of "timed alarm signal"

Law Regarding Prior Art Status

- In an IPR, the burden is on the petitioner to prove prior art status. *See, e.g., Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015); *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326 (Fed. Cir. 2008)
- Functional claim language does not have patentable weight. *See, e.g., In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997); *In re Simpson*, 102 Fed. Appx. 675, 678-79 (Fed. Cir. 2004); MPEP § 2114; *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*, 246 F.3d 1368, 1374-77 (Fed. Cir. 2001).

Petitioner's Proposed Modification To Lamb

- Modifying Lamb's security panel to initialize a countdown timer. (Petition at 28, 49, 51-53; Reply at 14-15.)
 - The ground does not propose a modification to Lamb's sensor

Petitioner's Proposed Construction of "timed alarm signal" (with functional language removed)

**"a signal in an alarm system" ~~for initiating a timer
associated with the security panel~~** (Reply at 4-5)

- No dispute that all patents/applications in the '340 patent's chain of priority disclose "a signal in an alarm system." (See, e.g., Petition at 6-7 (Petitioner asserting that the '340 patent's parent applications are only missing disclosure related to timers).)

Dispute #7: Sharma, alone, fails to disclose,
teach, or suggest a “timed alarm signal”
[claims 1 and 11]

Petitioner's Theory: Sharma's signal to enter "Timed Exit Mode"

Sharma discloses a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel (e.g., **processor 175** transmits signals to a receiver of "system control panel 102," over network 110, to enter a "Timed Exit Mode"), **the timed alarm signal for initiating a timer associated with the security panel** (e.g., for initiating a 30 second timer before the system is rearmed).

system 100 may enter a Timed Exit Mode for a predetermined amount of time, such as 30 seconds. When in Timed Exit Mode, the processor 175 may ignore the door control signal and/or disable the door contact 172. After the predetermined amount of time has elapsed, the system 100 is reset to the Armed Stay Mode, continuing to provide protection from intruders. Therefore, if the first door 112 is subsequently

Petition at 67-68, 76;
EX1011 at 8:11-21

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PATENT OWNER'S DEMONSTRATIVE EXHIBIT

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the below date, I caused the foregoing to be served by electronic mail to the following:

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