

Theta IP, LLC

August 27, 2025 Hearing Demonstratives

Apple Inc. v. Theta IP, LLC

U.S. Pat. Nos. 7,010,330; 10,129,825; 10,524,202; 11,564,164 & 11,638,210

IPR2024-00816, -00817, -00818, -00819, -00820

'330 Patent, claim 1

1. A method of receiving a signal using an integrated circuit, the integrated circuit comprising a signal path including a low-noise amplifier configured to receive the signal, a mixer having an input coupled to an output of the low-noise amplifier, and a low-pass filter having an input coupled to an output of the mixer, the method comprising:

determining a first signal strength at a first node in the signal path in the integrated circuit; and

reducing a switching current in the signal path by **dynamically changing an impedance of a component in the signal path** based on the first signal strength.

-00816 EX1001 ('330 Patent) at claim 1

'330 Patent, claim 23

23. A wireless transceiver integrated circuit comprising:

a receiver comprising a signal path, the signal path comprising:

a low-noise amplifier;

a mixer having an input coupled to an output of the low-noise amplifier; and

a low-pass filter having an input coupled to an output of the mixer; and

a first **signal strength indicator circuit** coupled to the signal path, and configured to determine a first signal strength;

wherein **an impedance in the signal path is configured to be dynamically adjusted** to reduce a switching current in response to the first signal strength.

-00816 EX1001 ('330 Patent) at claim 23

'330 Patent, claim 29

29. A wireless transceiver integrated circuit comprising:

a receiver comprising a signal path, the ***signal path comprising:***

a first circuit; and

a second circuit having an input coupled to an output of the first circuit; and

a first ***signal strength indicator circuit*** coupled to the signal path, and configured to determine a first signal strength;

wherein a gain of the first circuit is configured to be dynamically adjusted in response to the first signal strength, and

wherein ***an impedance in the second circuit is configured to be dynamically adjusted*** in response to the first signal strength.

-00816 EX1001 ('330 Patent) at claim 29

'825 Patent, claim 3

3. A method for power dissipation reduction in a receiver of a wireless transceiver of a battery powered portable wireless device, and a corresponding increase in battery life of the battery powered portable wireless device, the method comprising:

...
the wireless transceiver having a receiver signal path comprising a plurality of circuits, wherein the plurality of circuits includes an amplifier, a filter, and a mixer, and wherein the wireless transceiver comprises **a circuit for determining a signal strength of the interferer signal** and **a circuit for determining a signal strength of the desired signal**;

wherein the power dissipation reduction in the receiver is achieved by **causing a bias current to vary in one or more of the plurality of circuits in the receiver signal path** of the wireless transceiver as the signal strength of the interferer signal and the signal strength of the desired signal vary, according to the following:

...

-00817 EX1001 ('825 Patent) at claim 3; see *also id.* at claims 1, 8

'202 Patent, claim 7

7. A method for power dissipation control in a receiver of a wireless transceiver of a battery-powered portable wireless device, the receiver having a signal path comprising a plurality of circuits including at least an amplifier, a filter, and a mixer, wherein the receiver is configured to receive a wireless signal having a desired signal and an interferer signal, ... the method comprising:

...

determining the strength of the desired signal;

determining the strength of the interferer signal;

comparing the strength of the desired signal relative to the strength of the interferer signal; and

based on the comparison, when the plurality of circuits are functioning at better than the worst-case condition, **dynamically adjusting one or more of an impedance, a bias or a gain of one or more of the plurality of circuits in the signal path**, thereby controlling power dissipation.

-00818 EX1001 ('202 Patent) at claim 7; see also *id.* at claims 11, 13, 19

'164 Patent, claim 20

20. A battery-powered portable wireless device, comprising:
a wireless transceiver **comprising circuits for determining signal strengths of signals received**;
the wireless transceiver of the battery-powered portable wireless device further comprising a wireless receiver having a signal path comprising a plurality of circuits including at least an amplifier, a filter, and a mixer;
...
wherein the wireless transceiver is configured to **determine signal strengths of the desired signal and the interferer signal**;
wherein the wireless transceiver is configured **to compare the strength of the desired signal relative to the strength of the interferer signal**; and
based on the comparison ... the wireless receiver is configured to **dynamically adjust a bias of one or more of the plurality of circuits in the signal path**, thereby controlling power dissipation.

-00819 EX1001 ('164 Patent) at claim 20; see *also id.* at claims 1, 10, 15

'210 Patent, claim 1

1. A system for power dissipation reduction in a wireless receiver of a battery powered portable wireless device, and a corresponding reduction in a drain on battery life of the battery powered portable wireless device, the system comprising:

the wireless receiver configured to receive a wireless signal having a desired signal and an interferer signal;

the wireless receiver comprising a plurality of circuits, wherein the plurality of circuits comprise a receiver signal path and at least a **circuit configured to determine a signal level of the interferer signal and a signal level of the desired signal**; and

wherein when the desired signal level is greater than the interferer signal level, and both the desired and interferer signal levels are greater than the a noise floor, **an impedance affecting the receiver signal path is dynamically increased** until the noise floor is greater than the interferer signal level but still less than the desired signal level, whereby one or more drive currents are reduced, thereby reducing power consumption.

-00820 EX1001 ('210 Patent) at claim 1; see *also id.* at claims 3, 6, 10

varying an impedance / a bias in the signal path

(ALL CHALLENGED PATENTS)

different approaches

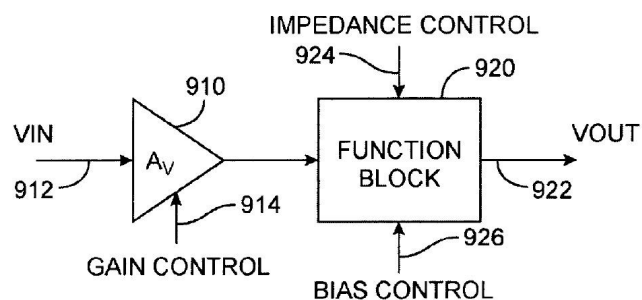
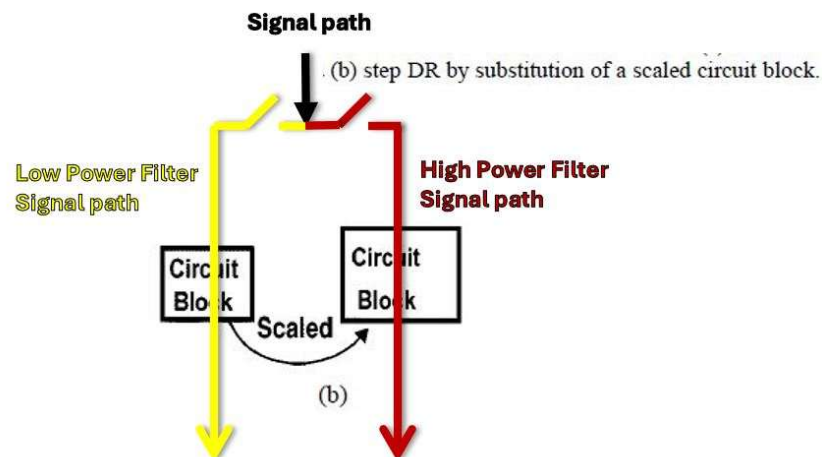


FIG. 9A



“dynamically changing an impedance of a component in the signal path”

VS.

“substitution of a scaled circuit block”

-00816 Response at 1-3, 41-44, 48-60, 71-73; Sur-Reply at 5-7, 9-15; EX2020 ¶¶44-48, 57-63; EX1001, claim 1; EX1004, 1207

patent support for dynamic variation approach

Apple ignores the plain meaning of the patent claim language and specification

'330 Patent claim 1:

“reducing a switching current in the signal path by dynamically changing **an impedance of a component in the signal path**”

'330 Patent claim 23:

“**an impedance in the signal path** is configured to be dynamically adjusted”

'330 Patent at 11:50-52:

“control the gain, biasing, and impedance levels of the circuits **in the receiver signal path**”

'330 Patent at 9:36-59:

“one or more impedance **in the function block** 920 may be increased”

-00816 Response at 48-52; Sur-Reply at 5-6, 14-15; EX2020 ¶¶44-48

patent support for dynamic variation approach

“The Tsividis Patents teach these adjustments as **changes effected in a single circuit block ...**”

EX2020 ¶¶43-48

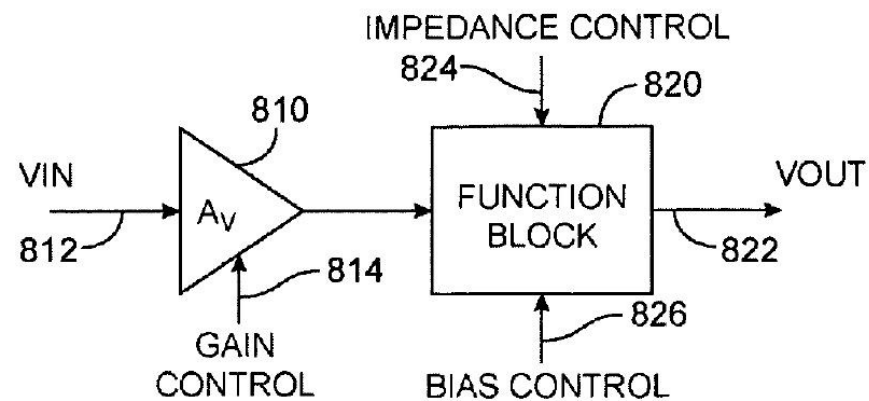


FIG. 8A

-00816 Response at 21-24, 62, 66-67; Sur-Reply at 5-7, 15-16; EX2020 ¶¶43-48

patent support for dynamic variation approach

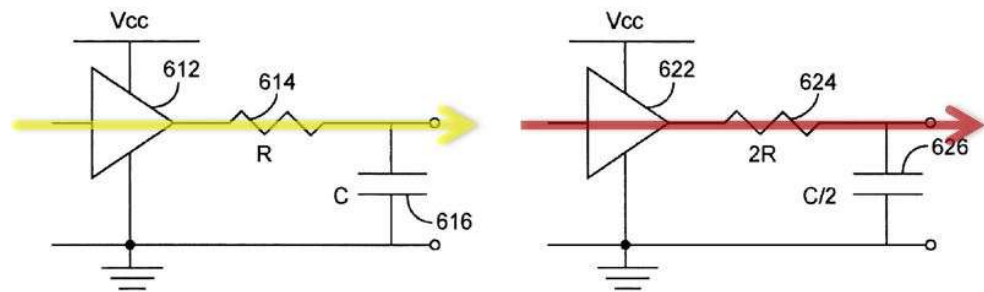
'330 Patent, 7:44-46:

“FIG. 6 is an example of how **a circuit's** impedances may be scaled”

'330 Patent, 7:57-59:

“In this way, an impedance can be scaled in order to decrease **a circuit's** required drive current.”

EX2020 ¶¶44-48



-00816 Response at 48-52; Sur-Reply at 16; EX2020 ¶¶44-48

patent support for dynamic variation approach

each challenged claim, and shared specification disclosures, are consistent

'825 Patent claim 3:

“causing **a** bias current to vary in one or more of the plurality of circuits **in the receiver signal path**”

'202 Patent claim 7:

“dynamically adjusting one or more of **an** impedance, **a** bias or a gain of one or more of the plurality of circuits **in the signal path**”

'330 Patent at 2:11-15:

“dynamically changing **an** impedance of **a** component **in the signal path**”

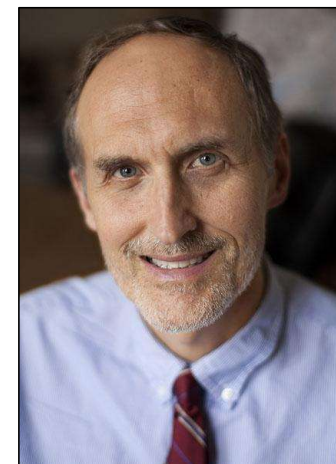
'330 Patent at 2:22-25:

“dynamically changing **a** bias current **in the signal path**”

-00816 Response at 48-52; Sur-Reply at 5-6, 14-15; -00817 Response, 48-52;
-00818 Response, 49-53; -00819 Response at 49-53; -00820 Response at 49-52; EX2020 ¶¶44-48

patent support for dynamic variation approach

48. Language of the challenged claims also refers to adjustments as occurring within a single circuit—and many specify a circuit within “the signal path.” [examples] In my opinion, a person of ordinary skill in the art would readily understand this claim language to be referring to **dynamic adjustments made to a parameter (e.g., “an impedance” or “a bias current” or gain) of a circuit “in the signal path,” via the internal components or structure of one circuit block.**



Professor Larson

-00816 Response at 48-52; Sur-Reply at 5-6, 14-15; EX2020 ¶¶43-48

Behbahani filter swap is not within the claims

EX1004, Fig. 4(b):

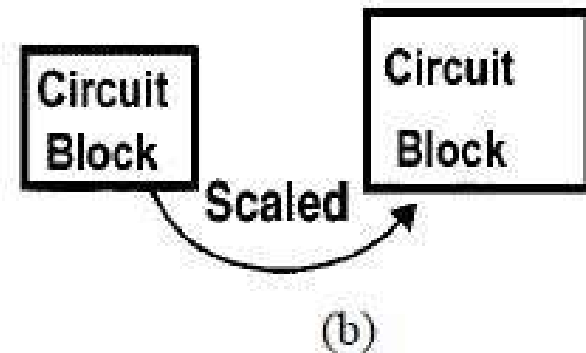
“substitution of a scaled circuit block.”

EX1004, 1206:

“substituting a scaled version of a nominal circuit”

EX1004, 1207:

“the high-power scaled filter is switched in”



“what we have chosen to do is ... substitute a bigger transconductor for a smaller one”

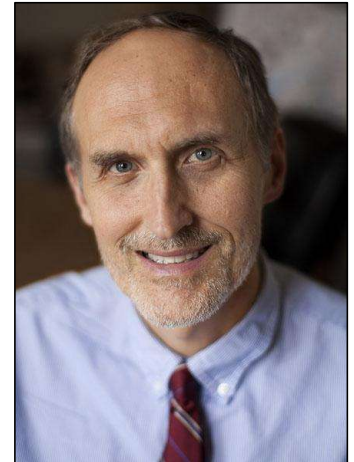
Prof. Abidi, EX2021, 71:15-74:17

-00816 Response at 1-3, 7-9, 54-60, 71-73; Sur-Reply at 1-2, 16; EX2020 ¶¶55-63, 73-85

no impedance change in signal path

62. ... Importantly, a person of skill in the art would understand that the impedance of each of these circuits does not change by virtue of the signal path being re-routed to pass through it.

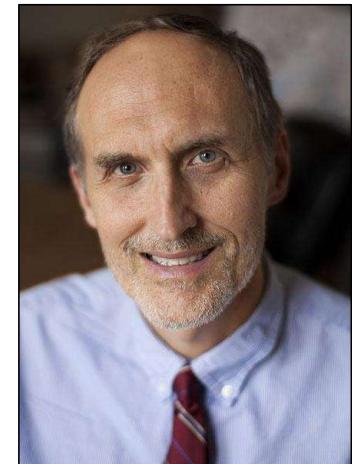
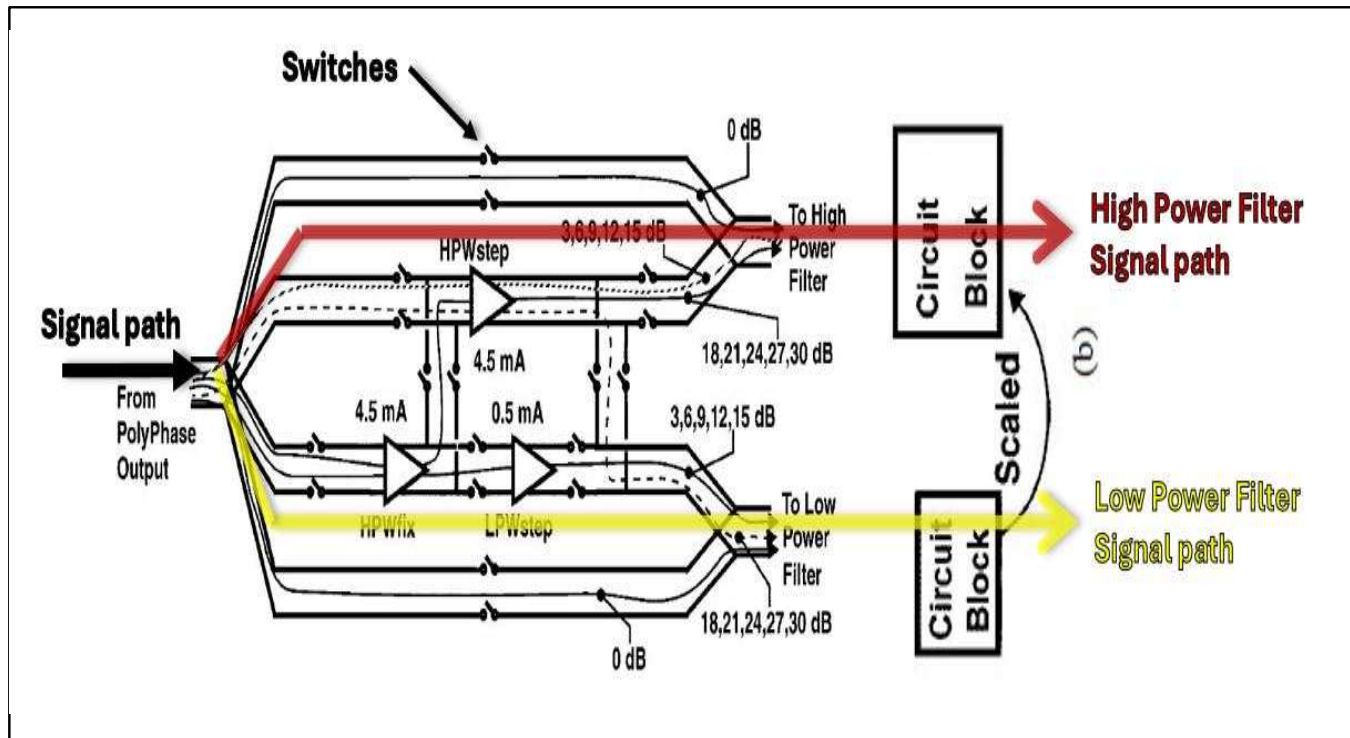
71. ... Neither filter experiences an impedance change by virtue of the swap. And neither filter is “in the signal path” throughout the swap.



Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 9-10; EX2020 ¶¶57-63, 70-72

no impedance change in signal path



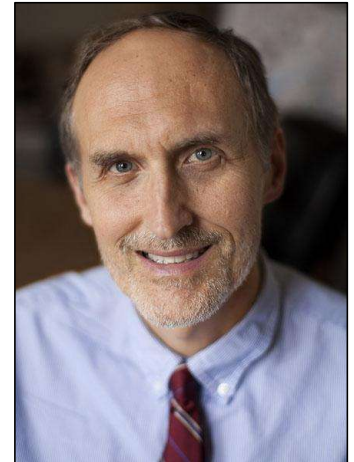
Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 9-10; EX2020 ¶¶57-63, 70-72

no impedance/bias change in signal path

76. ... The impedance and required bias of the low-power filter is not changed by *Behbahani's* filter substitution. The impedance and required bias of the high-power filter is not changed by *Behbahani's* filter substitution.

77. ... the impedance, and bias current, of each filter is static and does not change.



Professor Larson

Prof. Abidi, EX2021, 67:5-69:18:

“... We haven’t changed the transconductance of the low-pass filter; right?”

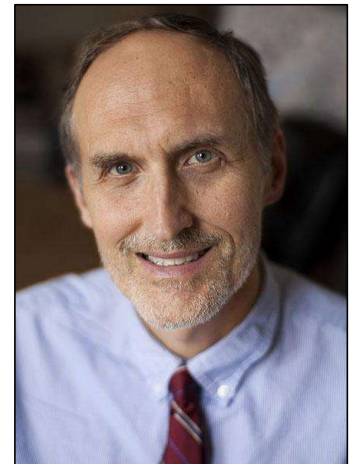
A. Yes. Okay.”

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 9-10; EX2020 ¶¶73-80

no impedance/bias change in signal path

79. ... In my opinion the challenged claim language is not met, because **no impedance of any circuit block changes** by virtue of the block being switched in or out of the changed signal path in *Behbahani*'s filter swap, as discussed above.

80. ... In my opinion the challenged claim language is not met, because **no bias current of any circuit block changes** by virtue of the block being switched in or out of the changed signal path in *Behbahani*'s filter swap ...



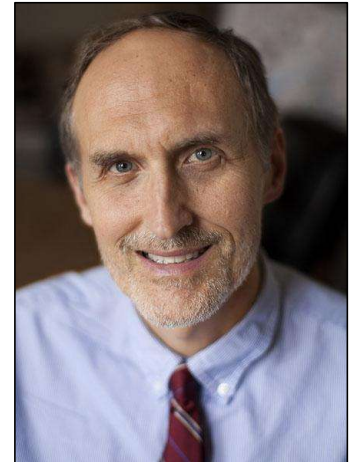
Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 9-10; EX2020 ¶¶73-80

no impedance/bias change in signal path

81. ... I understand that Apple has pointed to the overall band-pass “filter functional block.” ... But zooming out to view a larger portion of the system block diagram does not change the operation of the system or change my opinion.

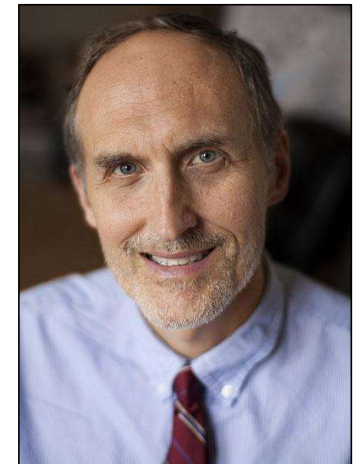
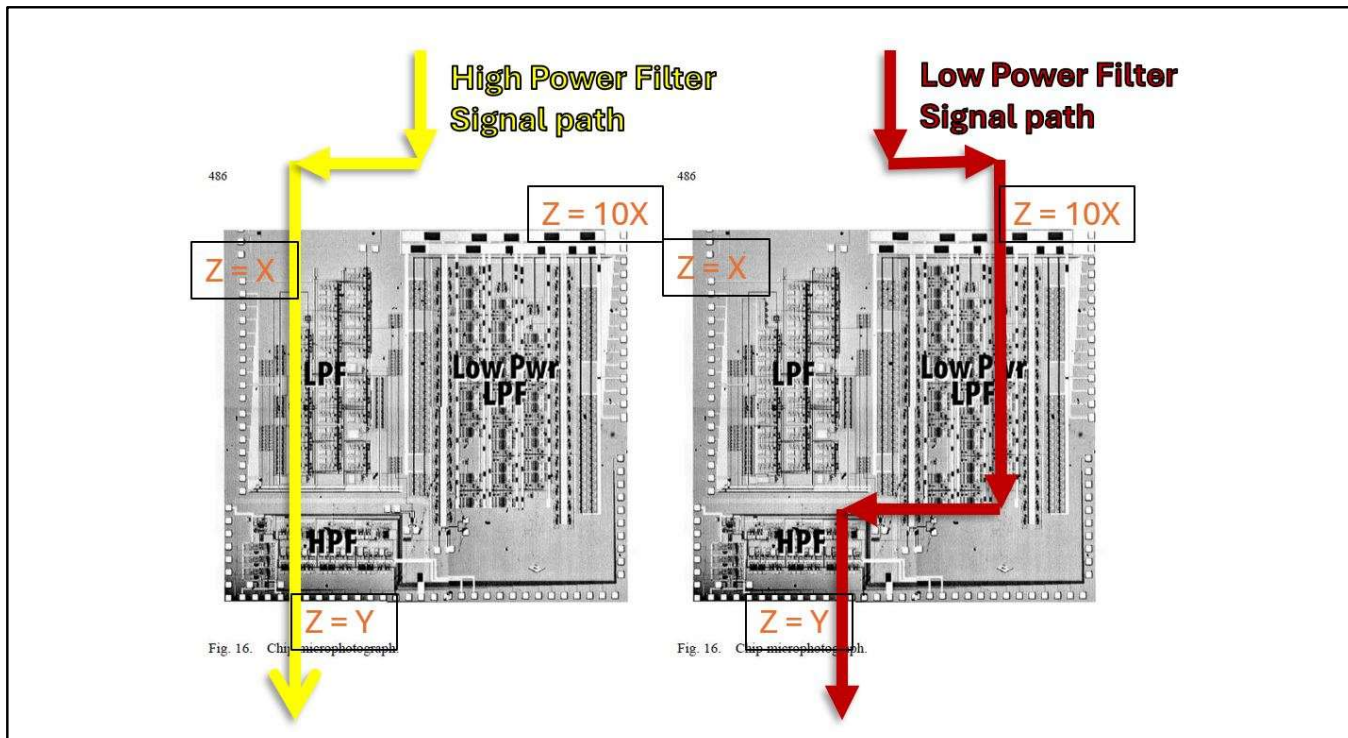
82. The band-pass filter of the *Behbahani* papers contains two alternate low-pass filters followed by one high-pass filter. Each of these has, for purposes of the filter swap that Apple and Professor Abidi identify, **a static impedance Z**, which I have indicated as “Z=X,” Z=10X,” and “Z=Y” in the diagram below. ...



Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 11-15; EX2020 ¶¶81-85

no impedance/bias change in signal path

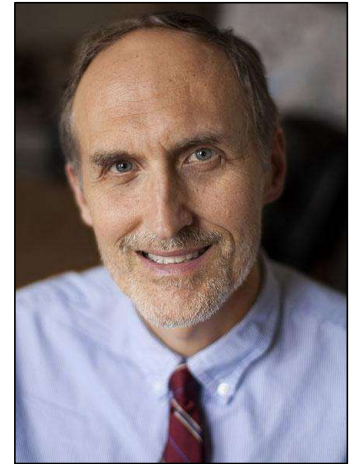


Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 11-15; EX2029 ¶¶81-85

no impedance/bias change in signal path

82. ... **What the band-pass filter of the Behbahani papers does not have is any individual impedance “in the signal path” that changes dynamically during operation.** In my opinion, a person of skill in the art would not understand re-routing the signal path to substitute one circuit for another to teach dynamically changing “an impedance” that is “in the signal path.” In that scenario, **no impedance remains in the circuit path and is adjusted.**

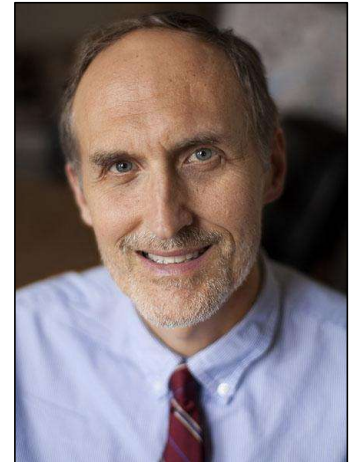


Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 11-15; EX2020 ¶¶81-85

no impedance/bias change in signal path

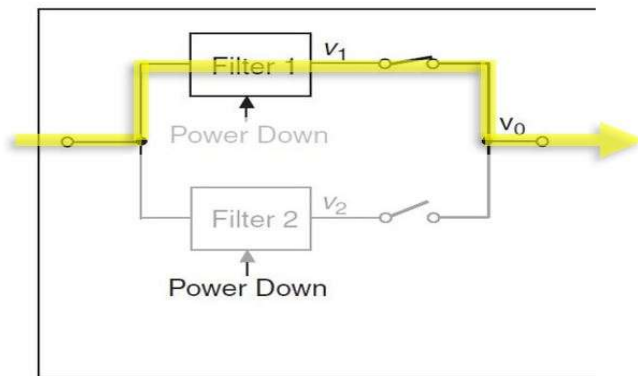
83. This understanding does not depend on whether one draws a larger box around more of the signal path, because that does not change the underlying approach employed in the circuits. In my opinion, a person of skill in the art would not understand a change to the overall impedance of the receiver, or of a section of the receiver chain containing multiple circuit blocks, effected only by re-routing the signal path, to be dynamically changing “an impedance,” “an impedance of a component,” or “an impedance” of a circuit “in the signal path” as used in claims of the Tsividis Patents.



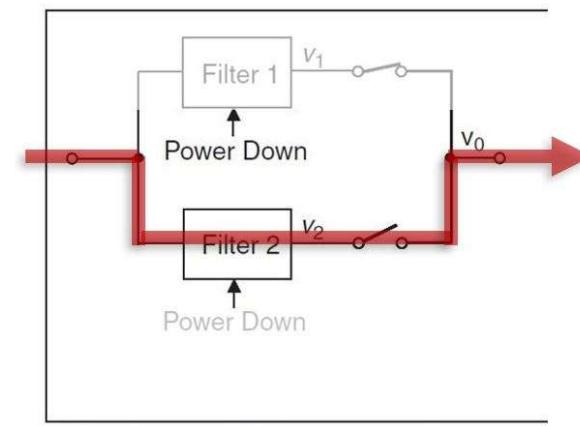
Professor Larson

-00816 Response at 2-3, 5-11, 45, 54-60; Sur-Reply at 1-2, 9-10; EX2020 ¶¶73-80

Tsividis taught distinction in approaches



11. Method to switch between two signal processes

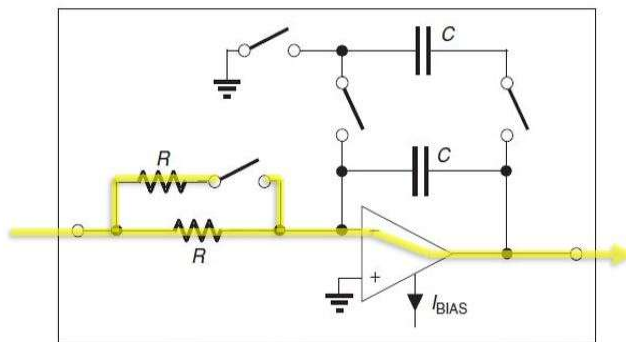


11. Method to switch between two signal processes

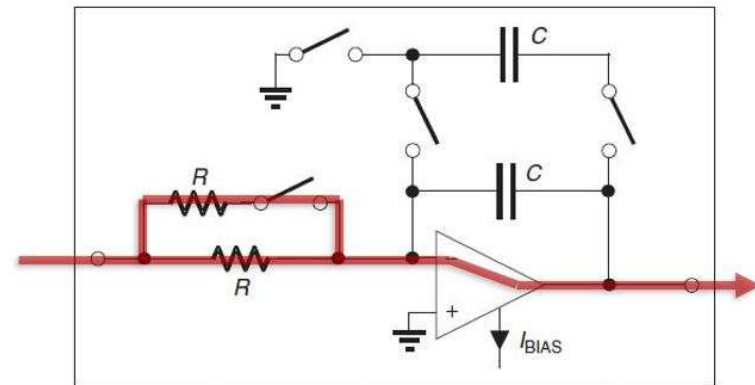
EX1011, 8 (“One way to achieve the above scenario would be to **use two filters**, designed with different capacitance values, and **place one or the other in service as required** [citing *Behbahani*]”)

-00816 Response at 3, 67-68; Sur-Reply at 19; EX2020 ¶¶64-72; EX1011, 8, Fig. 11

Tsividis taught distinction in approaches



12. An active RC circuit in which dynamic impedance scaling can be performed without causing output transients.

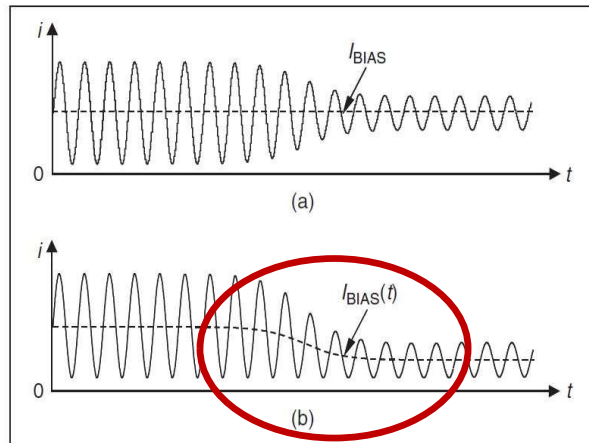


12. An active RC circuit in which dynamic impedance scaling can be performed without causing output transients.

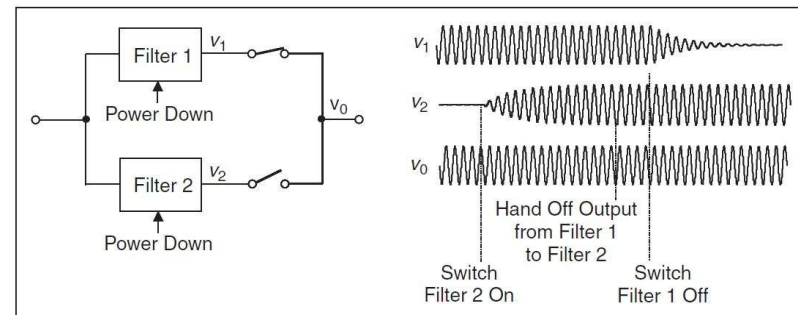
EX1011, 8 (“**switching individual filter elements rather than entire filters**” as “shown in Figure 12”), 9 (“**use a single filter and vary its structure dynamically**”), 9 (“dynamic impedance scaling (Figure 12)”), Fig. 12 (“An active RC circuit in which dynamic impedance scaling can be performed”)

-00816 Response at 3, 60-63; Sur-Reply at 19-20; EX2020 ¶¶64-72; EX1011, 8, 9, Fig. 12

Tsividis taught distinction in approaches



13. Typical bias and total signal currents in (a) a conventional circuit and (b) a dynamically biased circuit.



11. Method to switch between two signal processors with the same input-output behavior, without causing output transients.

EX1011, Fig. 13 (“a dynamically biased circuit”), Fig. 11 (“switch between two signal processors”)

-00816 Response at 3, 60-63; Sur-Reply at 19-20; EX2020 ¶¶64-72; EX1011, 8, 9, Figs. 11, 13

Tsividis taught distinction in approaches

When Prof. Tsividis wanted to teach and claim a filter swap, he did so plainly

Changing an impedance in, and remaining in, the signal path

'330 Patent claim 1:

reducing a switching current in the signal path by dynamically **changing an impedance of a component in the signal path**

Changing the signal path to swap circuit blocks

(unasserted) '251 Patent 9:59-62:

control logic 316 detects that it is time to **change the operating signal pathway from the upper filter 308 to the lower filter 310**

-00816 Sur-Reply at 5-6; EX1044

determining (interferer) signal strength

(ALL CHALLENGED PATENTS)

determining desired signal and interferer signal

Claims require circuits and/or specific determination of signal components.

'202 Patent claim 7:
determining the strength of the
desired signal;
determining the strength of the
interferer signal;

'164 Patent claim 1:
monitor the signal strength of the
interferer signal

'825 Patent claim 3:
a circuit for determining a signal
strength of the interferer signal
and a circuit for determining a
signal strength of the desired
signal

'210 Patent claim 1:
a circuit configured to determine
a signal level of the interferer
signal

-00818 EX1001, claim 7; -00817 EX1001, claim 3; -00819, EX1001, claim 1; -00820, EX1001, claim 1

Prof. Abidi admits determining not disclosed

The Reply Declaration's attempts to gap fill confirm that the *Behbahani* papers do not disclose any signal strength measurement circuit.

Petition, 40:

"*Behbahani* does not expressly teach calculating an absolute interferer signal strength."

Prof. Abidi, EX2021, 91:20-92:9:

"...they're not discussed in the papers either though, right?
A. Correct. Correct."

13. While I acknowledged that Behbahani "does not provide details about the specific circuit^T used to measure signal strength," a POSITA would indeed have understood that Behbahani suggested some circuit for measuring signal strength at A_I and A_O . Indeed, the purpose of Behbahani was to accommodate "a fully integrated receiver." It was our intent, which a POSITA would have understood, to include the described functionality integrated on a single chip, including circuitry for measuring signal strength at A_I and A_O . As I discussed in my original declaration, there is

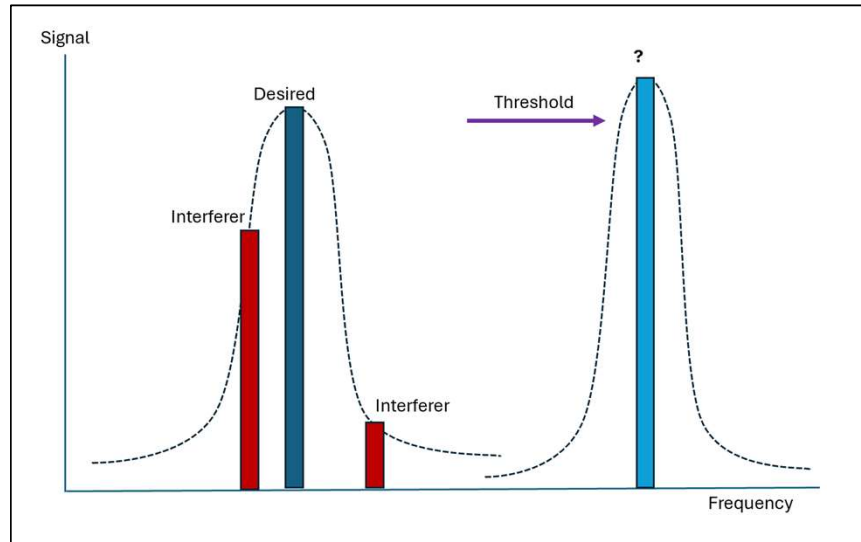
EX1042, ¶13; see also -00816 Response, 67; Sur-Reply at 7-8; -00817 Sur-Reply at 7-8
-00818 Sur-Reply at 7-8; -00819 Sur-Reply at 7-8; -00820 Sur-Reply at 7-8

Apple cites *combined* threshold measures

Threshold measures at A_i and A_o are not determinations of (interferer) signal strength.

EX1042, ¶12:
“a cumulative signal strength”

EX1042, ¶15:
“it is measuring the strength of the desired signal and any interferers [together]”
“a measure of the signal strength, capturing the desired and interferer signals”



Tan detector can detect only that combined signal has gone above a preset threshold.
EX2021, 89:12-14; EX1004, Fig. 8 (“VRef”)

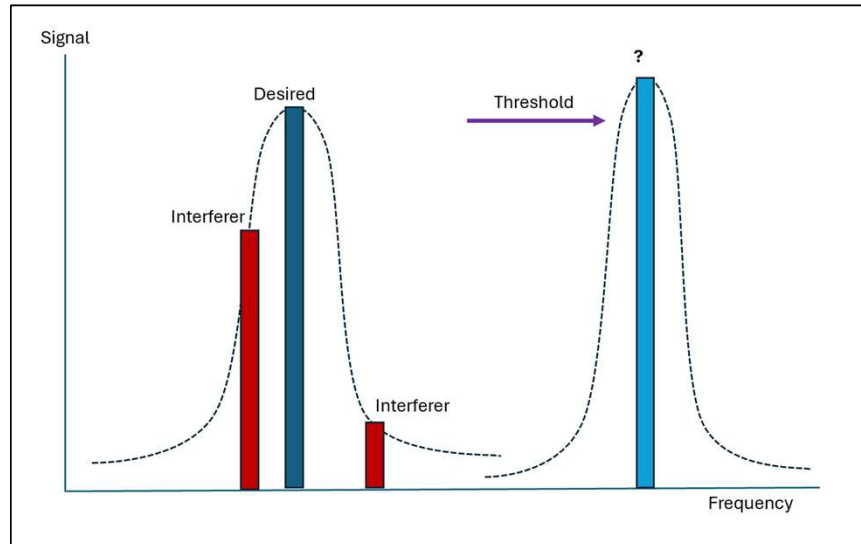
-00817 Response at 67-70; Sur-Reply at 24

Tan detectors cannot determine the signals

Apple does not dispute, instead suggesting for first time in Reply that POSITA would “modify” *Tan* in unspecified way, using background knowledge:

EX1042, ¶15:

“I believe a POSITA would have considered using a simplified version of Tan’s circuit”



Tan detector can detect only that combined signal has gone above a preset threshold.
EX2021, 89:12-14; EX1004, Fig. 8 (“VRef”)

-00817 Response at 67-70; Sur-Reply at 24

Apple failed its burden of proof

Apple and Prof. Abidi failed to address obviousness or point to any evidence of the specific determinations required by the claims.

EX2021, 91:20-92:9, 94:3-18:

(“...they’re not discussed in the papers either though; right? A. Correct. Correct.”)

EX1042, ¶13 (“It was our intent, which a POSITA would have understood, to include the described functionality ...”);

¶14 (“assumes that a POSITA would have understood how to implement”)

¶16 (“we did not discuss this circuit”)

Obviousness of important elements must be in references, it cannot come only from “common” or background knowledge.

-00817 Sur-Reply at 23 (citing *DSS Technology Management, Inc. v. Apple Inc.*, 885 F.3d 1367, 1374-76 (Fed. Cir. 2018)).

-00816 Response, 67-70, Sur-Reply at 7-8, 21-24; see also -00817 Sur-Reply at 7-8

-00818 Sur-Reply at 7-8; -00819 Sur-Reply at 7-8; -00820 Sur-Reply at 7-8

comparing

('202 PATENT & '164 PATENT CLAIMS 10 & 20)

comparing **desired** signal strength to **interferer** signal strength

'202 Patent claims

comparing the strength of the desired signal [relative to] the strength of the interferer signal

'164 Patent claim 20

“configured to compare the strength of the desired signal relative to the strength of the interferer signal”

'164 Patent claim 10

“determines a relative strength of the desired signal and the interferer signal”

Apple discusses only comparing *combined signal measures at different points—*
**but never comparing of a determined *desired signal strength* to
any determined *interferer signal strength*.**

-00818 Response at 68-70; Sur-Reply at 21-23; see Petition at 38-40

-00819 Response at 68-69; Sur-Reply at 23-24; see Petition at 40-42

Petition asserts “express teaching” without evidence

Behbahani (1) expressly teaches **comparing** the desired and interferer signal strengths and (2) renders obvious calculating an absolute interferer signal strength

Like the '202 Patent, *Behbahani* teaches that the difference between signal levels measured at nodes “A_I and A_O is a measure of the out-of-band *interferers* being rejected by the analog [filter].” *Behbahani*, 1207. **The interferer signal power** that remains after the *analog* filter is then calculated by **comparing** the difference between signal levels into and out of the *digital* filter. *Id.* (“[B]y **comparing** the signal level at the input and the output of the digital filter (D_I and D_O), the relative strength of the out-of-channel signal that passes through the analog filter is calculated.”). From these two sets of measurements, *Behbahani* can determine the **total interferer signal strength** received on the signal path. *Dec.*, ¶117 (explaining that the difference between A_I and A_O combined with the difference between D_I and D_O, accounting for gain introduced by any of the amplifiers, represents the total signal strength of the **interferer signals**). *Behbahani* teaches that the difference between the signal strength measured at nodes A_I and A_O and the difference between the signal strength measured at nodes D_I and D_O are used in its adaptive DR process:

Apple mentions the claimed comparison in a Petition heading.

But only ever discusses comparing to allegedly determine interferer signal strength.

Apple fails to discuss or show the claimed comparisons of interferer with desired signal.

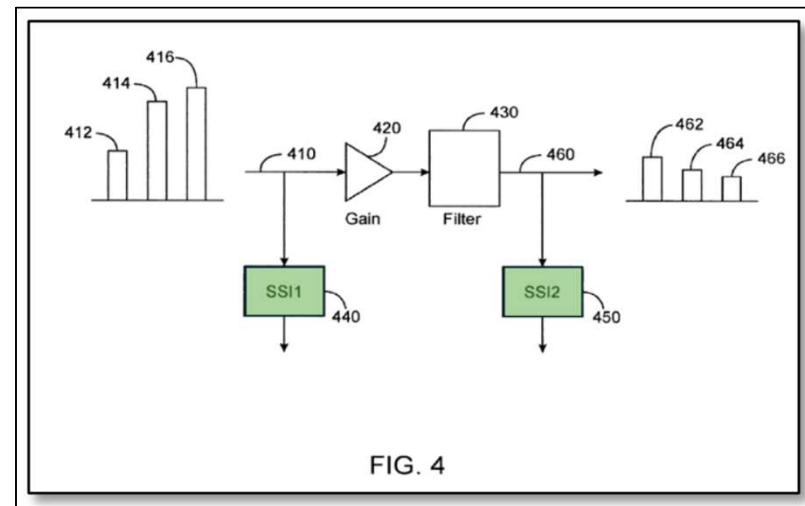
-00818 Petition at 38-39; see also Response at 68-70; Sur-Reply at 21-23
See also -00819 Petition at 40-42; Response at 68-69; Sur-Reply at 23-24

Apple did not address the claimed comparison

In Petition and on Reply, Apple ignores the claim language, instead referring to an embodiment involving “cumulative” signal levels. **There is no citation of the *claimed* “comparing” elements in *Behbahani*.**

Apple only ever discusses comparing to allegedly derive signal strength measures

Apple never acknowledges or evidences the specific comparison of the desired and interferer signal strength measures.



-00818 Reply at 23-25; *id.* at 4; Sur-Reply at 21-23; -00819 Reply at 23-24; Sur-Reply at 23-24

Apple failed to show adjustments based on comparison

'202 Patent claim examples:

Claim 1: “... responsive to the comparing”

Claim 7: “**dynamically adjusting ... responsive to the comparing**”

Claim 11: “**based on the comparing ...**”

Claim 19: “**based on the comparing ...**”

'164 Patent claim examples:

Claim 10: “**responds to a change in the relative strength of the desired signal and the interferer signal by ...**”

Claim 20: “**based on the comparison ...**”

Apple’s discussion of these elements does not address the required comparison.

-00818 Response at 70; Sur-Reply at 23; see Petition at 51-53

-00819 Response at 68-69; Sur-Reply at __; see Petition at 69, 72, 57-60

Apple did not address the claimed comparison

Instead of alleging that the filter substitution occurs “responsive to” the **claimed comparison**, Apple argues that it occurs only based on the **measurements**.

'202 claim 1(b):
“dynamically adjusting ...
responsive to the **comparing**.”

Accordingly, a POSITA would have understood that switching from the high-power filter to low-power filter is based on signal strength measurements of the desired and interferer signal strengths taken at multiple points in the receiver signal path of the wireless transceiver. *Dec.*, ¶¶157-58.

'202 Abidi Decl. (EX1003)

157. Accordingly, a POSITA would recognize that switching from the high-power filter to low-power filter is based on signal strength measurements taken at multiple nodes in the signal path on an integrated circuit, including at nodes A_I and A_O. And when Behbahani switches from its high-power filter to its low-power filter based on signal strength measurements, as discussed above, it (1) increases the signal

-00818 Response at 70; Petition at 53 (claim 1(b))
See also, e.g., *Petition* at 62 (claim 7(b)), 64 (claim 11(b)), 65 (claim 12(b)), 66 (claim 14(b)), 68 (claim 16(b)), 72 (claim 22(b)) – all incorporating claim1(b))

Apple did not address the claimed comparison

Instead of alleging that the filter substitution occurs “responsive to” the ***claimed comparison***, Apple argues that it occurs only based on the ***measurements***.

'164 claim 1(f):

Accordingly, a POSITA would have understood that switching from the high-power filter to low-power filter is based on signal strength measurements of the desired and interferer signal strengths taken at multiple points in the receiver signal path of the wireless transceiver. *Dec.*, ¶154.

'164 Abidi Decl. (EX1003)

154. Accordingly, a POSITA would recognize that switching from the high-power filter to low-power filter is based on signal strength measurements taken at multiple nodes in the signal path on an integrated circuit, including at nodes A_I and A_O. And when *Behbahani* switches from its high-power filter to its low-power filter based on signal strength measurements, as discussed above, it (1) increases the signal

-00819 Response at 68-69; Petition at 59 (claim 1(f))
See also, e.g., Petition at 69 (claim 10(c)), 73 (claim 20(f)) – incorporating claim 1(f))

motion to strike/exclude

(ALL CHALLENGED PATENTS)

Apple changed its basic theory

Prof. Abidi did not originally identify the bandpass as the component alleged to meet the dynamic variation elements, changing theories on Reply.

Professor Abidi, EX2021, 67:5-69:8; see also id. 76:16-77:2:

“Q. Okay. So, ‘Dynamically changing an impedance of a component in the signal path.’ So, in your opinion, what component in the signal path has its impedance dynamically changed?

A. ***The transconductors.***

Q. Of the low-pass-filter?

A. Yes.”

Professor Abidi, Reply Declaration, EX1042, ¶4:

“... identified ***Behbahani’s variable filter block***—a “variable bandwidth adaptive dynamic range band pass filter”—as the component or circuit in the signal path whose impedance is dynamically varied, as claimed.”

-00816 Sur-Reply at 3; Motion, Paper 23 at 3-4, 5-6

discretion

(ALL CHALLENGED PATENTS)

these actions are inconsistent with Office policy

This is an admitted follow-on challenge.

These are long-settled (and now expired) patents.

The asserted art was put before the examiner by Professor Tsividis.

Apple failed to show past material error by the Office.

- See, e.g., *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5, 2025 WL 1441509, at *2 (P.T.A.B. May 19, 2025)

“Board panels have disagreed as to whether a petitioner must provide an analysis under part two of *Advanced Bionics* and, if so, **whether a petitioner ... can simply rely on its unpatentability contentions to imply that an error occurred.** ... This decision resolves that dispute and clarifies that a **petitioner must provide an analysis even when the asserted prior art is on an IDS, but the Examiner did not apply the reference.**”

“In that analysis, a **petitioner must explain**, with reference to *Becton Dickinson* factors (c), (e), and (f), **how the Examiner erred** in overlooking the prior art. See *Advanced Bionics*, Paper 6, at 10.”

-00816 Sur-Reply at 7-8, 25-27 & Prelim Resp. at 56-62; -00817 Sur-Reply at 7-8, 24-26 & Prelim. Resp. at 59-62; -00818 Sur-Reply at 7-8, 23-25 & Prelim. Resp. at 57-63; -00819 Sur-Reply at 7-8, 24-26 & Prelim. Resp. at 55-61; -00820 Sur-Reply at 8, 23-25 & Prelim Resp. at 54-60

these actions are inconsistent with Office policy

Should not have been instituted.

- *Ecto World*, IPR2024-01280, Paper 13 at 5 (“**Petitioner’s generalized statements as to the strength of its Petition fail to identify sufficiently a material error. Ordinarily, that would mean a denial of institution.**”); see IPR2024-00816, Paper 12 at 23 (“by pointing to the proposed grounds”).

There is no right to institution.

- See, e.g., *Ecto World*, IPR2024-01280, Paper 13 at 9.

The Board has inherent authority to reconsider institution.

- *Sling TV, L.L.C. v. Realtime Adaptive Streaming LLC*, 840 F. App’x 598, 598-99 (Fed. Cir. 2021).

Proceedings may be dismissed post-institution.

- See, e.g., *Hulu LLV v. Piranha Media Distribution, LLC*, IPR2024-01252, Paper 17, at 3, 2025 WL 1144790, at *1 (P.T.A.B. April 17, 2025) (applying *Fintiv*).

-00816 Sur-Reply at 7-8, 25-27 & Prelim Resp. at 56-62; -00817 Sur-Reply at 7-8, 24-26 & Prelim. Resp. at 59-62; -00818 Sur-Reply at 7-8, 23-25 & Prelim. Resp. at 57-63; -00819 Sur-Reply at 7-8, 24-26 & Prelim. Resp. at 55-61; -00820 Sur-Reply at 8, 23-25 & Prelim Resp. at 54-60

thank you
