

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROVISUR TECHNOLOGIES, INC.,
Petitioner,

v.

WEBER MASCHINENBAU GMBH BRIEDENBACH,
Patent Owner.

Case IPR2024-00269
Patent No. 11,331,823

**EXPERT DECLARATION OF MR. MICHAEL JOBIN IN SUPPORT OF
PETITIONER'S REPLY TO THE PATENT OWNER RESPONSE**

**Provisur EX1037
IPR2024-00269
U.S. Patent No. 11,331,823**

Inter Partes Review of U.S. Patent No. 11,331,823
Expert Declaration of Mr. Michael Jobin

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1011	Roisum, D., The Mechanics of Web Handling (1998) (Excerpts)
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1013	U.S. Patent No. 6,752,056 (“Weber 056”)
1014	U.S. Patent No. 4,253,597 (“Waffner”)
1015	Eggen, T., “Get a Grip on Your Web” (2009)
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I, Michael Jobin, hereby declare as follows:

1. I am the same Michael Jobin who submitted a previous declaration in Case No. IPR2024-00258, which I understand was filed EX1003, and in Case No. IPR2024-00269, which I understand was filed EX1003. I have been retained on behalf of Provisur Technologies, Inc. (“Provisur”) for the above-captioned *inter partes* review proceedings.

2. My background and qualification are discussed in my opening declaration. In forming my opinion, I considered all of the references cited in my opening declaration and the Petition. I also considered all of the documents cited in this declaration. I am not an attorney, and I am not offering any opinions on the law in this proceeding. Counsel for Provisur has generally informed me of certain legal standards that are relevant to my analysis. I addressed those legal principles in my opening declaration.

3. I understand that claims of the challenged patent have been construed in district court proceedings. I reviewed this construction and my opinion regarding the invalidity of the challenged patent remains the same whether the district court construction or plain and ordinary meaning of the claim terms applies.¹

¹ EX1041 (*Provisur v. Weber III*, Dkt. 311 (Order re Provisur’s Claim Construction of Counterclaim Patents)).

I. THE PROPOSED GROUNDS RENDER OBVIOUS THE CHALLENGED CLAIMS OF THE '823 PATENT

A. Ground 1: The Combination of Müller and GEA438 Renders the Challenged Claims of the '823 Patent Obvious.

1. My previous declaration analyzed a proposed combination with particularity.

4. I disagree with Dr. Kurfess's characterization of my prior declaration as only containing a "vague description" of the proposed combination of Müller and GEA438.² Rather, my declaration contained eighty-one paragraphs explaining, in a claim-by-claim analysis, where in Müller and GEA438, respectively, a POSA would understand the claimed elements to be taught.³ I spent an additional thirty-nine paragraphs explaining why a POSA would be motivated to combine the teachings of Müller and GEA438.⁴ I believe that I have described the prior art and the proposed combination with particularity and specificity. To summarize at a high level, I proposed a combination of prior art that operates using the principles of the interleaver disclosed in Müller that incorporates a vacuum chamber and contact surface, as taught by GEA438, to Müller's strip guide. This combination would have obvious benefits as to sensing, threading, and tension control/loop stability.

² *Contra* EX2007, ¶ 66 (Kurfess Declaration).

³ EX1003, ¶¶ 218–288 (Jobin Opening Declaration).

⁴ EX1003, ¶¶ 179–217 (Jobin Opening Declaration).

2. The teachings of Müller and GEA438 are technically compatible.

a) The two buffers of Müller serve different purposes.

5. Müller teaches an interleaver where the preferred embodiment has “two accumulators” (i.e. buffers) “between the interleaver reel and the location at which the interleaver strip is inserted into the cutting plane.”⁵ The first buffer, buffer 8, has a “higher storage capacity” and “has a dancer.”⁶ The second buffer, buffer 12, “preferably has a substantially lower capacity than the buffer 8.”⁷

6. I disagree with the opinions Dr. Kurfess formed as to buffer 12 and buffer 8. Dr. Kurfess opines that a POSA would understand that “buffer 8 is able to provide an initial ‘coarse’ level of control to the interleaver system as the material is unreel from the interleaver reel [whereas] buffer 12 is able to provide a finer level of control.”⁸ I do not believe a POSA would reach this understanding.

7. Rather, a POSA would understand that buffer 8 accommodates differences between the unreeling speed and the steady-state, average speed of paper through the interleaver. In contrast, a POSA would understand that buffer 12

⁵ EX1004, ¶ [0026] (Müller).

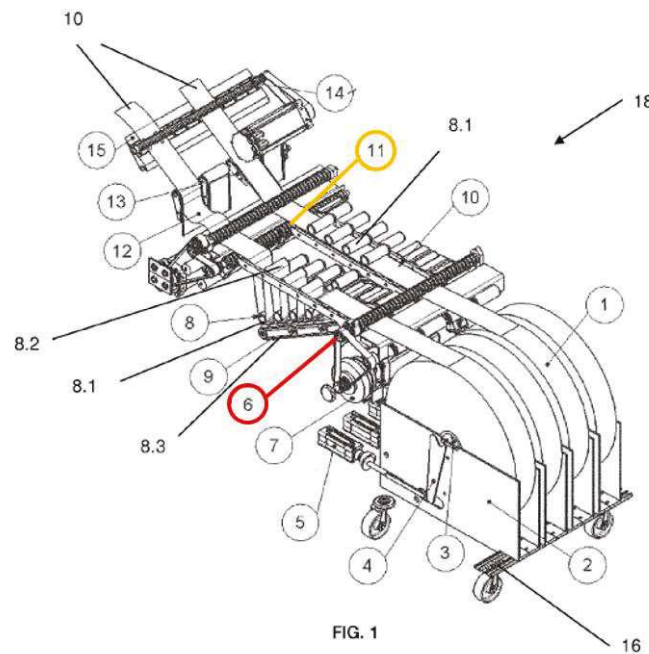
⁶ EX1004, ¶ [0027] (Müller).

⁷ EX1004, ¶ [0048] (Müller).

⁸ EX2007, ¶ 31 (Kurfess Declaration).

accommodates differences between the steady-state, average speed and the instantaneous, high-acceleration, high-jerk⁹ behavior at the cutting plane.

8. Regarding buffer 8, Müller teaches that buffer 8 “compensates for a difference between the unreeling speed and the consumption of the interleaver strip” as well as “in the event of a necessary stop, it buffers the overrun of the interleaver reel, which is braked only by friction.”¹⁰ In other words, buffer 8 compensates for the difference in speed between drive 6 and drive 11:



EX1004 (Müller), Fig. 1 (Petitioner's annotations).

⁹ Acceleration is the second derivative of displacement over time (i.e. rate of change in velocity) and jerk is the third derivative of displacement over time (i.e. rate of change in acceleration).

¹⁰ EX1004, ¶ [0035] (Müller).

Müller is explicit that “the unreeling of the interleaver reel is carried out at least virtually without momentum, i.e. the third derivative of the distance/time graph of the interleaver strip is zero or virtually zero.”¹¹ I note that while Müller uses the term “momentum” to refer to the third derivative of distance over time, a POSA would understand that this is a reference to “jerk,” which is the instantaneous change in acceleration at a point in time. And “the interleaver reel is driven as far as possible without momentum [i.e. jerk], i.e. is driven as slowly as possible-with the lowest possible fluctuations and without peaks, so that the unreeling speed does not exceed the transport speed of the interleaver strip or exceeds the same only slightly.”¹² A POSA would recognize that this purpose of buffer 8 (compensating for differences in speed, but not needing to compensate for differences in acceleration or jerk) is reflected in the design of buffer 8. Buffer 8 is controlled by “dancer” rollers, which impart a constant tension on a buffered length. However, dancer arrangements are incompatible with high-jerk applications, because the inertia of the dancer rollers restricts the achievable changes in acceleration.¹³ Meanwhile, buffer 8 must be “sufficiently large” because once the speed of drive 6 and drive 11 become mis-

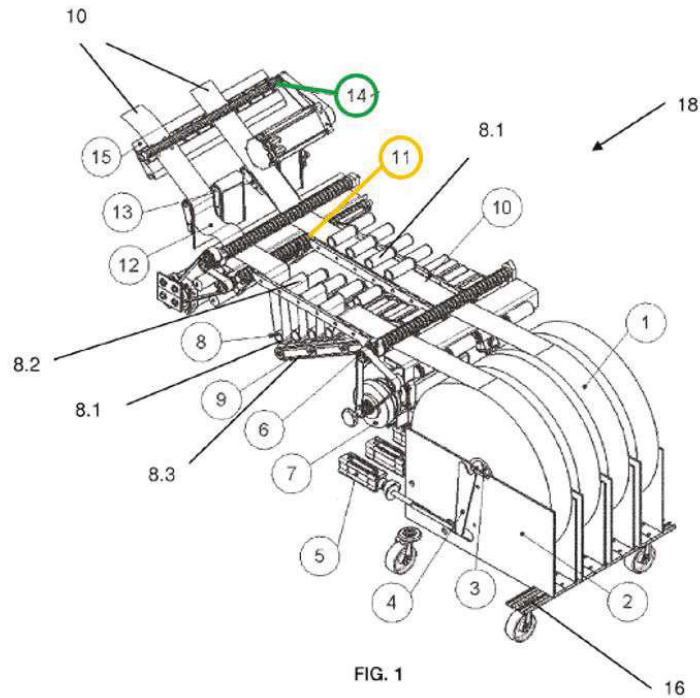
¹¹ EX1004, ¶ [0036] (Müller).

¹² EX1004, ¶ [0013] (Müller).

¹³ EX1042, p. 1 (Rapparini).

matched (such as when stopping interleaving), the mis-match must be corrected slowly in order to satisfy the low-jerk principles taught by Müller.¹⁴

9. A POSA would understand that buffer 12 serves a different purpose entirely. Buffer 12 acts to buffer the differences between drive 11 and drive 14:



EX1004 (Müller), Fig. 1 (Petitioner's annotations).

Unlike drives 6 and 11, drive 14 is subject to notably high acceleration and jerk. Müller teaches this explicitly: “The interleaver e[j]ector roller **14** described is used here for the interleaver strip ejection and is subjected, to extremely high accelerations...”¹⁵ This is because roller 14 “is driven intermittently ... subjected to

¹⁴ EX1004, ¶¶ [0035]-[0036] (Müller).

¹⁵ EX1004, ¶ [0053] (Müller).

very high accelerations.”¹⁶ Indeed, Müller teaches that roller 14 must be made of special materials to withstand these high accelerations (and relatively high jerks).¹⁷ A POSA would recognize that this purpose of buffer 12 (compensating for differences in acceleration or jerk) is reflected in the design of buffer 12. For example, Müller teaches that buffer 12 is a loose “loop,” without any dancer roller to provide tension or an inertial load.¹⁸ Further, the use of such a free-hanging loop (which takes on roughly the shape of a “catenary”) indicates that buffer 12 is designed to hold web under “exceptionally **light tensions**.”¹⁹ A POSA would understand that buffer 12 holds “as much interleaver material as is needed for the [next] ejection” at a light tension, in order to compensate for the high-acceleration, high-jerk behavior of drive 14.²⁰

10. To summarize:

- Buffer 8 compensates differences in *speed* between unreeling the web and providing the web to buffer 12’s loop (i.e. the average speed of web through the device); and
- Buffer 12 compensates differences in *acceleration* and *jerk* between the provision of web by drive 11 and the insertion of web into the cutting area by drive 14.

¹⁶ EX1004, ¶ [0039] (Müller).

¹⁷ EX1004, ¶ [0040] (Müller).

¹⁸ EX1004, ¶ [0048] (Müller).

¹⁹ EX1011, p. 61 (The Mechanics of Web Handling).

²⁰ EX1004, ¶ [0048] (Müller).

These functions are different; buffer 12 is not merely a “finer level of control.”²¹

11. I specifically disagree with Dr. Kurfess’s conclusion that “[b]ecause the speed at which material is unreeled from the roll is often slower than the high acceleration required at the cutting region, buffer 8 serves to decouple the input speed from the output speed.”²² Rather, as explained above in ¶ 8, buffer 8 is not designed to buffer high-acceleration, high-jerk feeds from low-acceleration, low-jerk feeds. The “high acceleration required at the cutting region” is buffered by buffer 12, not buffer 8. Buffer 8 is concerned with differences between the unreeling speed and the *average* speed of paper through the machine, as reflected by (low-acceleration, low-jerk) drive 11. And in direct contrast to Dr. Kurfess’s conclusion, Müller teaches that the unreeling speed, if it differs at all from the transport speed at drive 11, “*exceeds* the same only slightly.”²³ In other words:

²¹ *Contra* EX2007, ¶ 31 (Kurfess Declaration).

²² *Contra* EX2007, ¶ 34 (Kurfess Declaration).

²³ EX1004, ¶ [0011] (Müller) (emphasis added).

Müller's Teaching	Dr. Kurfess's Incorrect Interpretation
Speed at which material is unreeled from the roll is occasionally slightly faster than the low speed required at drive 11 .	Speed at which material is unreeled from the roll is often slower than the high acceleration required at the cutting region .

12. I specifically disagree with Dr. Kurfess's conclusion that "Müller's buffer 8 achieves coarse loop control."²⁴ To begin with, "coarse loop control" is not a term of art and it is difficult to know what Dr. Kurfess intended with that language. Assuming he meant that Müller's buffer 8 is imprecise, I disagree. Müller's buffer 8 buffers enough material to compensate for the speed differential between drive 6 and drive 11 during shutdown (when interleaver reel 1 is gradually slowing down as a result of being "braked only by friction").²⁵ And dancer rollers hold the buffered material in buffer 8 at a desired tension. A POSA would not regard this control as "coarse."

13. I specifically disagree with Dr. Kurfess's conclusion that "Buffer 8 accounts for the slow, unreeling speed upstream and allows material to be quickly provided to buffer 12."²⁶ A POSA would understand that drive 6 and drive 11

²⁴ *Contra* EX2007, ¶ 34 (Kurfess Declaration).

²⁵ EX1004, ¶ [0035] (Müller).

²⁶ *Contra* EX2007, ¶ 37 (Kurfess Declaration).

operate, in the long run, at the same speed. If drive 6 were consistently slower than drive 11, then buffer 8 would eventually be exhausted and operation would stop. Rather, as explained above at ¶ 12, buffer 8 accommodates temporary differences in speed between drive 6 and drive 11, such as when the unreeling speed is *faster* than the speed material is provided to buffer 12 because the reel continues to spin (braked only by friction) for a period of time after feed through the rest of the system has stopped.

14. I specifically disagree with Dr. Kurfess's conclusion that "buffer 8 serves as the main decoupling mechanism for Müller's interleaver apparatus."²⁷ Rather, as explained above in ¶¶ 7-10, buffer 8 serves one purpose, and buffer 12 serves a different purpose. A POSA would not regard buffer 8 as "main" or otherwise more important than buffer 12.

15. I specifically disagree with Dr. Kurfess's conclusion that "the lower capacity of buffer 12 indicates that this portion of *Müller's* interleaver system achieves more fine-tuned control."²⁸ Rather, as explained above in ¶ 9, a POSA would understand that buffer 12 provides a low-tension supply of web material which can be removed with high acceleration and high jerk by drive 14.

²⁷ *Contra* EX2007, ¶ 34 (Kurfess Declaration).

²⁸ *Contra* EX2007, ¶ 37 (Kurfess Declaration).

16. I specifically disagree with Dr. Kurfess’s conclusion that “[t]he smaller size of the loop in buffer 12 allows the material to travel less distance between ejections.”²⁹ The size of the desired interleaf determines how far the strip must travel between each ejection. That is independent of the size of buffer 12.

17. I specifically disagree with Dr. Kurfess’s conclusion that buffer 12 is a “tight” loop.³⁰ As I explain above in ¶ 9, a POSA would understand that buffer 12 is used to store a low-tension loop, not a tight loop.

18. To summarize, a POSA would recognize that the salient feature of buffer 12 is not its size (as Dr. Kurfess) suggests. Rather, the salient feature of buffer 12 is that it buffers a near-constant-speed (low acceleration, low jerk) upstream zone with a highly-variable-speed (high acceleration, high jerk) downstream zone. In considering techniques that could improve buffer 12 of Müller, a POSA would look to teachings that involve loops used for this purpose (i.e., buffers that accommodate high-acceleration, high-jerk removal).

b) GEA438’s vacuum brake teachings are compatible with Müller’s buffer system.

19. I have reviewed the opinions in Dr. Kurfess’s declaration that GEA438’s vacuum system is incompatible with Müller’s buffer 12 and I disagree.

²⁹ *Contra* EX2007, ¶ 37 (Kurfess Declaration).

³⁰ *Contra* EX2007, ¶ 32 (Kurfess Declaration).

My opinion remains unchanged that, in view of Müller, GEA438, and a POSA's general skill and understanding of the prior art, the challenged claims are obvious.

20. I disagree with Dr. Kurfess's opinion that "these required components associated with GEA438's vacuum brake would not fit at Müller's buffer 12."³¹ As explained in my deposition, the main modification a POSA would make is to "modify[] Müller's strip guide [13] to include the...vacuum chamber components as described in GEA438."³² GEA438's vacuum chamber components, referred to in GEA438 as the delay unit, include "the suction plate and the holes and the vacuum-generating unit and the vacuum chamber itself."³³ I disagree with Dr. Kurfess that in addition to the suction plate with holes, the vacuum-generating unit, and the vacuum chamber, "an air-permeable surface would be required for the pressure sensor to function."³⁴ The suction plate is an air permeable surface, and a pressure sensor is not required to meet the claim elements.

21. A POSA would understand Müller's strip guide 13, without any modification, to be a contact surface. Accordingly, a POSA would understand that aside from modifying strip guide 13 to be air permeable, the only additional

³¹ EX2007, ¶ 70 (Kurfess Declaration).

³² EX2009, 85:19-21 (Aug. 27, 2024 Jobin Cross-Examination).

³³ EX2009 85:9-12 (Aug. 27, 2024 Jobin Cross-Examination).

³⁴ EX2007, ¶ 69 (Kurfess Declaration).

components one would need is a vacuum-generating unit and vacuum chamber. These components could be made small enough to fit within the existing space of strip guide 13. Further, as GEA438 contemplates, the suction plate can be connected to the vacuum generating unit, or suction unit, “by way of a fluid line [that] is fluidically connected to a suction unit.”³⁵ Müller’s strip guide 13 could certainly accommodate the vacuum chamber connected to a suction unit via fluid line. I note that Dr. Kurfess estimates that the contact surface in Müller—even as limited to the single preferred embodiment he considered—would be about twelve inches long. I note the figures in Müller depict the strip guide 13 and buffer loop 12 in schematic form, and the specification does not provide explicit dimensions of those components. This is more than sufficient to incorporate a vacuum-based sensor or a vacuum-based brake.

22. I disagree that “GEA438’s vacuum system imposes substantially more complexity to Müller’s system and would occupy far more real estate.”³⁶ Dr. Kurfess does not specify what he means by “substantially more complexity,” so it is difficult to evaluate his conclusion. Further, it is not supported by evidence that incorporating the additional functionality taught by GEA438 would add any

³⁵ EX1005, ¶ [0011] (GEA438).

³⁶ EX2007, ¶ 71 (Kurfess Declaration).

complexity to Müller's system. A POSA would understand that in order to integrate the teachings of GEA438 with Müller's strip guide 13, the only additional components would be modifying strip guide 13 to be air-permeable, and incorporating a vacuum-generating unit and vacuum chamber.

23. Dr. Kurfess is incorrect that "[t]he length of the suction plate is required to provide the braking force disclosed in GEA438."³⁷ Dr. Kurfess supports his opinion by stating that "[a]s shown in [GEA438 Fig. 1], GEA438's vacuum-based system assumes a length of material travels over a significant distance with a series of apertures that provide air flow delay unit 1."³⁸ This is not supported by GEA438. As a threshold matter, as I explained in my deposition, the illustrations GEA438 are "diagrammatical in some sense, and not all of the details are present..."³⁹ There is not a scale that indicates any specific length in the figures. Further, GEA438 does not specify a particular length the suction plate must be in order to be functional.⁴⁰ In fact, GEA438 specifically contemplates interchangeable suction plates that "differ in particular in terms of the dimensions thereof and/or in terms of the number, size thereof, and/or the arrangement of suction openings."⁴¹

³⁷ EX2007, ¶ 71 (Kurfess Declaration).

³⁸ EX2007, ¶ 71 (Kurfess Declaration).

³⁹ EX2009, 76:9-10 (Aug. 27, 2024 Jobin Cross-Examination).

⁴⁰ EX1005 (GEA438).

⁴¹ EX1005, [0013]

24. I disagree that “[i]f only a small portion of the material contacted GEA438’s suction plate, there would not be enough suction force to overcome the inertia of the roll.”⁴² A POSA would understand that there are multiple factors that determine the amount of suction force created by the delay unit. For example, as specifically contemplated in GEA438, the “negative pressure generated in the suction openings of the suction plate for suctioning the separating material” is variable “depend[ing] on the air throughput of the fan, said air throughput being determined by the constructional parameters of the fan as well as by the rotating speed of the fan.”⁴³ A POSA would understand that the suction force created by the delay unit can be increased through the constructional parameters and rotating speed of the fan.

25. I further disagree that a POSA would believe that the operation of Müller depends on buffer 12 being particularly small.⁴⁴ To begin with, although Müller describes that it is “preferabl[e]” for buffer 12 to “buffer[] only as much interleaver material as is needed for the ejection on an interleaver,” Müller does not describe that small size as mandatory.⁴⁵ Rather a POSA would understand that

⁴² EX2007, ¶ 71 (Kurfess Declaration).

⁴³ EX1005, [0012]

⁴⁴ *Contra* EX2007, ¶¶ 37, 39 (Kurfess Declaration).

⁴⁵ EX1004, ¶ [0048] (Müller).

buffer 12 could accomplish its purpose (buffering between a low-acceleration/low-jerk region and a high-acceleration/high-jerk region) even if buffer 12 were larger than depicted in Müller’s “preferabl[e]” arrangement. Indeed, a larger buffer 12 would make it easier to buffer the intermittent motion, as it would be more forgiving to any delay in speed adjustments to drive 11. Moreover, a POSA would understand that Müller explicitly describes that the buffer must be as large “as is needed.”⁴⁶ If the buffer needed to be larger in order to accommodate a sensor or brake region, Müller does not caution against such a modification. Indeed, Müller’s preference that buffer 12 would still have “a substantially lower capacity than the buffer 8” allows for a range of size options for buffer 12.⁴⁷ Müller would not discourage a POSA from following the path set out by GEA438, even *if* using GEA438’s vacuum brake technique would require a larger size for buffer 12. Nor would Müller’s disclosures lead a POSA in a divergent direction from exploring vacuum sensors and vacuum brakes. Müller’s interleaver teachings, as modified by GEA438’s vacuum brake teachings, would be operable even if a POSA increased the size of Müller’s buffer.

⁴⁶ EX1004, ¶ [0048] (Müller).

⁴⁷ EX1004, ¶ [0048] (Müller).

26. Additionally, Müller teaches that its two-buffer embodiment though preferable, is not mandatory. The functions I describe above in ¶¶ 5-18 could be performed by a one-buffer embodiment. In a one-buffer embodiment of Müller's teaching, the (single) buffer 12 would be larger in order to accommodate the function that is performed by buffer 8 in the two-buffer embodiment. During shutdown of the machine, there would have to be enough buffer capacity in buffer 12 to accommodate the overrun from the material store which has a relatively high inertia and would remain rolling even after the downstream (cutting and interleaving) processes had stopped. And in the one-buffer embodiment of Müller's teaching, the (single) buffer 12 would be a loose loop (tensioned primarily by gravity) in order to provide low-tension web rapidly to the blade.

27. I do not agree that the addition of GEA438 would "increase Müller's system's cost as well as increasing the cost of maintaining and installing the system."⁴⁸ As a preliminary matter, contrary to Dr. Kurfess's assertion, a POSA would "expect to have a readily available vacuum source in clean environments such as those Müller's system targets."⁴⁹ Weber's own patents confirm my understanding. Weber is the assignee on patent documents describing use of a

⁴⁸ *Contra* EX2007, ¶ 72 (Kurfess Declaration).

⁴⁹ *Contra* EX2007, ¶ 72 (Kurfess Declaration).

“vacuum bell jar” or other “vacuum device” for gripping food products in a slicer;⁵⁰ “means of a generated vacuum” in a food transport holder;⁵¹ a “suction hose” connected “to a vacuum source” in a food handling robot;⁵² and “a suction nozzle and connection lines to a vacuum generator” for use in a self-cleaning slicer.⁵³ Cleaning the paper-removal device of an interleaver is relatively simple. As Müller teaches, the paper removal device is a separate unit, which can be docked by “docking means” to the slicer itself.⁵⁴ A POSA would understand that the removal device (including the loop and sensor) is located in a separate cabinet and isolated from the area where food product is sliced.⁵⁵ A POSA would further understand that the interleaver material itself would be food-safe (and free of pathogens). Because the interleaver removal device is exposed only to food-safe web material and isolated from (potentially contaminated) meat, there would be low concerns of bacterial harborage in the interleaver removal device, including in the vacuum chamber. Developing cleaning protocols for this low-risk zone would be well within a POSA’s capability, particularly given the undisputed facts that a POSA would be part of an

⁵⁰ EX1043, Col. 5:30-45 (US 8,892,239); EX1044, Col. 3:22-29 (US 10,751,899).

⁵¹ EX1045, ¶ [0052] (US 2018/0169888).

⁵² EX1046, Col. 4:37-48 (US 11,174,057).

⁵³ EX1047, ¶ [0050] (US 2013/0104709).

⁵⁴ EX1004, [0032] (Müller).

⁵⁵ EX1024 (Weber Slicer 604 Video) (https://www.youtube.com/watch?v=caL_C4AqnyA); EX1022 (GEA DualSlicer Video) (<https://video.gea.com/gea-dualslicer>).

interdisciplinary team and could consult with subject matter experts in the field of hygiene.⁵⁶

28. Even if a POSA did not expect to find a vacuum source available in the food processing environment, a POSA would certainly expect to find a compressed air source, which can be used in connection with a venturi vacuum generator to create sufficient vacuum pressure. GEA438 contemplates multiple means of generating negative pressure, including a fan, Venturi nozzle, or vacuum pump.⁵⁷ As GEA438 states “[t]he use of a fan represents a comparatively cost-effective solution that is easy to implement.”⁵⁸ And a POSA would know that including a Venturi nozzle would be a simple and inexpensive addition that is well within a POSA’s skill.

29. Further, Dr. Kurfess’s opinion is directly contradicted by GEA438. In describing the advantages of its invention over the prior art, GEA438 states that “the overall number of rollers can be significantly reduced in relation to the prior art, on account of which the delay unit according to the invention can be designed so as to be more compact, lighter, cheaper, and less maintenance intensive.”⁵⁹ A POSA

⁵⁶ Dr. Kurfess does not provide any competing criteria for a person of ordinary skill, and appears to adopt my proposed criteria from ¶¶ 43-44 of EX1003.

⁵⁷ EX.1005, ¶ [0012] (GE438).

⁵⁸ EX 1005, ¶ [0012] (GE438).

⁵⁹ EX 1005, ¶ [0009] (GE438).

would understand that by implementing the teachings of GEA438 to Müller, the system complexity and required maintenance would actually decrease.

30. I further disagree that “[i]mplementing a vacuum chamber would increase the complexity, and therefore, increase the difficulty of cleaning said environment.”⁶⁰ GEA438 specifically contemplates the hygiene of its teachings. For example, GEA438 states that one advantage of the delay unit over the prior art, is that “the delay unit can be more easily replaced, for example for the purpose of maintenance or cleaning, since the in particular tape-shaped separating material does not have to be guided over a roller of the delay unit.”⁶¹

31. Additionally, a POSA would understand that cleaning the paper-removal device of an interleaver is relatively simple. As Müller teaches, the paper removal device is a separate unit, which can be docked by “docking means” to the slicer itself.⁶² A POSA would understand that the removal device (including the loop and sensor) is located in a separate cabinet and isolated from the area where food product is sliced.⁶³ A POSA would further understand that the interleaver material itself would be food-safe (and free of pathogens). Because the interleaver

⁶⁰ EX2007, ¶ 72 (Kurfess Declaration).

⁶¹ EX1005, ¶ [0009] (GEA438).

⁶² EX1004, ¶ [0032] (Müller).

⁶³ EX1024 (Weber Slicer 604 Video) (https://www.youtube.com/watch?v=caL_C4AqnyA); EX1022 (GEA DualSlicer Video) (<https://video.gea.com/gea-dualslicer>).

removal device is exposed only to food-safe web material and isolated from (potentially contaminated) meat, there would be low concerns of bacterial harborage in the interleaver removal device, including in the vacuum chamber. Developing cleaning protocols for this low-risk zone would be well within a POSA's capability, particularly given the undisputed facts that a POSA would be part of an interdisciplinary team and could consult with subject matter experts in the field of hygiene.⁶⁴

3. A POSA would be motivated to use the techniques of GEA438 in Müller.

a) GEA438's disclosures are directly applicable to Müller.

32. I disagree that a POSA "would understand that GEA438 does not disclose any type of dynamic loop control of the interleaver material."⁶⁵ As an initial matter, "dynamic loop control" is not a term of art and it is unclear what Dr. Kurfess intended with that language. A POSA would be familiar with "closed-loop control" and "open-loop control."⁶⁶ These terms refer to control principles taught across disciplines including engineering, mathematics, and physics.⁶⁷

⁶⁴ Dr. Kurfess does not provide any competing criteria for a person of ordinary skill, and appears to adopt my proposed criteria from ¶¶ 43-44 of EX1003.

⁶⁵ *Contra* EX2007, ¶ 73 (Kurfess Declaration).

⁶⁶ EX1027, p.18-20 (Web Handling Handbook).

⁶⁷ EX1027, p. 18 (Web Handling Handbook).

33. Closed-loop control, or feedback control, is the “preferred, automatic method of maintaining each control variable at or near its desired value or set point.”⁶⁸ The control variable is measured by a sensor, and its value converted to an electrical signal to feed into the controller.⁶⁹ The set point is subtracted from the control value to produce an error signal, which the controller produces as an output signal, which is input into the system and changes the control variable.⁷⁰ This process occurs constantly.⁷¹ In contrast, with open-loop control there is no feedback of the control variable, however the system input may still be adjusted to obtain the desired value.⁷² In both methods of loop control, a related variable may be input to the controller, for example the winding roll diameter signal may be used to provide the correct winding tension.⁷³

34. A POSA would understand that both Müller and GEA438 could be implemented in a closed-loop system. In Müller, “the unreeling device has a sensor which monitors the progress of the consumption of the individual interleaver reel and in particular is connected to the open-loop/closed-loop control system of the

⁶⁸ EX1027, p. 18 (Web Handling Handbook).

⁶⁹ EX1027, p. 18 (Web Handling Handbook).

⁷⁰ EX1027, p. 18 (Web Handling Handbook).

⁷¹ EX1027, p. 18-19 (Web Handling Handbook).

⁷² EX1027, p. 20 (Web Handling Handbook).

⁷³ EX1027, p. 20 (Web Handling Handbook).

system according to the invention, which outputs an appropriate signal as necessary when one or more cartridges have to be replaced or refilled.”⁷⁴ In GEA438, “the fan is preferably controlled by way of a closed-loop control circuit in which the rotating speed of the fan wheel is incorporated as a manipulated variable and the unrolling or transporting speed (actual speed) is incorporated as a regulating and feedback variable. The unrolling and transporting speed is in this way automatically maintained in a predefined range.”⁷⁵

35. Alternatively, if Dr. Kurfess is opining that a POSA would distinguish the buffering system disclosed in Müller from a system without any loose loop buffering mechanism, I also disagree with that opinion. A POSA would understand that the teachings of GEA438 are aimed at the same issue addressed by Müller’s buffer 12 and address that issue with an advantageous brake. For reasons discussed in Section I.A.2.a, a POSA would understand that Müller’s buffer 12 provides a low-tension supply of web material which can be removed with high acceleration and high jerk by drive 14 whereas a POSA would understand that buffer 8 accommodates temporary differences in speed between drive 6 and drive 11.

⁷⁴ EX1004, ¶ [0049] (Müller).

⁷⁵ EX1005, ¶ [0012] (GEA438).

36. Müller’s buffer 12 compensates differences in acceleration and jerk between the provision of web by drive 11 and the insertion of web into the cutting area by drive 14. As stated in Müller, drive 14 “is driven intermittently ... subjected to very high accelerations.”⁷⁶ Similarly, in GEA438, a drive “which in an intermittent manner conveys the separating material 2 in the direction of the cutting machine 20 and herein unrolls said separating material 2 from the tape roll 11 is between the severing installation and the delay unit.”⁷⁷ The delay unit “serves for delaying the transporting movement 3 of the tape along the transporting direction, said transporting movement 3 being caused by the drive, so as to increase the transporting resistance of the tape. It is ensured in this way that the tape when unrolling from the tape roll 11 is at all times tensioned and the tape does not jump from the tape roll 11 or from the deflection rollers 4, or kinks, tears, or backs up.”⁷⁸

37. A POSA would understand that the delay unit, similar to Müller’s buffer 12, is compensating for the high, intermittent acceleration of the upstream drive. Accordingly, it is not correct that a POSA “would distinguish the buffering system disclosed in Müller from a system without any dynamic loop control.”⁷⁹

⁷⁶ EX1004, ¶ [0039] (Müller).

⁷⁷ EX1005, ¶ [0029] (GEA438).

⁷⁸ EX1005, ¶ [0030] (GEA438).

⁷⁹ *Contra* EX2007, ¶ 74 (Kurfess Declaration).

38. Further, a POSA would recognize the applicability of GEA438's vacuum teachings to loose loop buffering systems. Utilizing a vacuum brake, such as that disclosed in GEA438, was a well-known method of providing stability to loose web material.⁸⁰ A POSA would understand that methods of providing stability and tension to web material is applicable regardless of if the material is in a loose loop store or some other location.

39. Further, Dr. Kurfess states that “[i]n contrast to Müller, a non-dynamic system absent any loop-based buffer does not achieve decoupling between inlet and outlet speeds via the loop itself nor by adjusting the length of said loop.”⁸¹ Assuming Dr. Kurfess is referring to a buffering mechanism that accommodates variance in inlet and outlet speeds by modifying the length of the material when using the term “dynamic loop control,” it is not the case that GEA438 does not disclose dynamic loop control.⁸²

40. GEA438 teaches the use of sensor to monitor the unrolling or transporting speed.⁸³ The “fan is preferably controlled by way of a closed-loop control circuit in which the rotating speed of the fan wheel is incorporated as a

⁸⁰ See e.g., EX1005 (GEA438), EX1006 (DePoi), EX1007 (Fukuchi), EX1009 (Bryer), EX1017 (Kröhnert).

⁸¹ EX2007, ¶ 74 (Kurfess Declaration).

⁸² *Contra* EX2007, ¶ 74 (Kurfess Declaration).

⁸³ EX1005, ¶ [0012] (GEA438).

manipulated variable and the unrolling or transporting speed (actual speed) is incorporated as a regulating and feedback variable. The unrolling and transporting speed is in this way automatically maintained in a predefined nominal range.”⁸⁴ When the sensor detects an actual speed exceeding the nominal range, the rotating speed of the fan increases, increasing the amount of suction, which causes the actual speed to decrease. When the actual speed is below the nominal range, the rotating speed of the fan decreases, which causes the actual speed to increase. A POSA would understand that modifying the speed of the fan proportionally modifies the friction between the web material and suction plate, which will eventually reduce the transporting speed back to its “nominal range.” However, a POSA would further understand that during this transition, the loop would either increase or decrease its length for the period of time that the inlet and outlet speeds are mis-matched. Consequently, a POSA would understand that GEA438 discloses a “dynamic” loop (to use Dr. Kurfess’s term).

41. Further, a POSA would recognize how incorporating the teachings of GEA438 would be beneficial to Müller. While the buffer system of Müller offers many advantages, it is not able to prevent completely “tearing of the interleaver

⁸⁴ EX1005, ¶ [0012] (GEA438).

strip” or the “unreeling of the interleaver reels...”⁸⁵ A POSA would be motivated to incorporate techniques that would improve Müller’s buffer system. By incorporating the delay unit of GEA438, a POSA would be able to more effectively minimize the risk tears.

b) GEA438’s disclosures would simplify threading in Müller’s web handling device.

42. Contrary to Dr. Kurfess’s opinion, GEA438 would simplify threading of Müller’s web handling device.⁸⁶ A POSA would understand that the vacuum teachings of GEA438 could be used during threading to help simplify the process. For example, the operator could use the suction effect to temporarily “pin” the interleaver material to the contact surface, freeing the operator’s hands to make adjustments to the path of the interleaver material at other points of the machine.

43. A POSA would recognize this as an improvement over the teachings of Müller. Müller discloses that during threading, the strip guide 13 must be rotated into a horizontal position.⁸⁷ While this allows the interleaver paper to rest somewhat securely on top of strip guide 13, a POSA would recognize that adding a suction effect would make this arrangement even more secure. And a POSA would realize that a suction effect could allow strip guide 13 to be rotated back into its buffering

⁸⁵ EX1004, ¶ [0026] (Müller).

⁸⁶ EX2007, ¶ 79 (referencing ¶ 54-56) (Kurfess Declaration).

⁸⁷ EX1004, ¶¶ [0031], [0048] (Müller).

position while threading is still taking place. This would let a machine operator build a loop in buffer 12 during the threading process, saving time during operation because a loop would already exist. A POSA could design the vacuum brake in a way that allowed the strip guide to still rotate.

c) Vacuum brakes are more reliable and suitable for high-acceleration processes than other forms of brake.

44. Further, a POSA would understand that GEA438 offers an additional benefit of reducing the heavy wear on interleaver rollers on account of imprecise friction applications. As explained directly in GEA43, buffering mechanisms relying on dancer rollers suffer from “heavy wear [that] is created on the interleaver rollers on account of the friction that is initiated in an artificial manner.”⁸⁸ A POSA would understand that by reducing the amount of wear on the interleaver rollers, one is reducing the frequency and cost of maintenance. This would be extremely important to a POSA. And a POSA would understand that other forms of tension control, such as the dancer rollers used in Müller’s buffer 8, would be unsuitable for this application because they suffer from inertial effects incompatible with the high-acceleration, high-jerk profile of ejector roller 14.⁸⁹

⁸⁸ EX1005, ¶ [0006] (Müller).

⁸⁹ EX1043, p.1 (Rapparini).

d) GEA438's disclosures would improve tension control in Müller's web handling device.

45. Dr. Kurfess opines "[t]he value of utilizing a vacuum system for tension control does not exist within the context of a system like Müller's in which buffer 12 retains a small size with less interleaver material."⁹⁰ I disagree with his opinion.

46. As I discuss above at ¶ 9, a POSA would understand that the purpose of buffer 12 is to compensate for the high-acceleration, high-jerk profile of ejector roller 14, as compared to the low-acceleration, low-jerk profile of drive means 11. A POSA would recognize that when ejector roller is rapidly stopped, inertia will tend to cause the web material strip 10 remaining in buffer 12 to continue traveling toward ejector roller 14. However, because ejector roller 14 is stopped, the web material strip 10 will bunch up against ejector roller 14, resulting in the web material being completely slack (zero tension or lower) at ejector roller 14. A POSA would understand that should tension drop to zero or lower, the web material may "flop and flutter," "shift," "wander sideways," "lose traction," and experience "wrinkling."⁹¹ In other words, a POSA would know "[c]ertainly, the tension must not be allowed

⁹⁰ EX2007, ¶¶ 56-58 (Kurfess Declaration).

⁹¹ EX1011, p. 49 (The Mechanics of Web Handling).

to fall below zero even momentarily.”⁹² I discuss these concerns in more detail in my original declaration.⁹³

47. A POSA would recognize that, without some way to maintain a minimum tension, Müller’s loop would experience moments of zero or lower tension, which could lead to performance issues. As I discuss in more detail in my original declaration, it would be obvious to a POSA that including a device that maintains a minimum tension would improve the operation of Müller.⁹⁴ And a POSA would readily understand that a vacuum-based contacting sensor would be such a device. The suction effect between the web material and the contact surface would increase the friction on the web material, applying a slight braking force. A POSA would understand that this braking force would prevent the web material from continuing to travel up and out of the loop after ejector roller 14 had stopped. For example, this braking effect is attested to throughout the prior art available to a POSA.⁹⁵ As these prior art sources readily teach, using a vacuum’s braking effect for this purpose is particularly beneficial “during a decelerating movement of the

⁹² EX1011, p. 52 (The Mechanics of Web Handling).

⁹³ EX1003, ¶¶ 195-198 (Opening Jobin Declaration).

⁹⁴ EX1003, ¶¶ 199-203 (Opening Jobin Declaration).

⁹⁵ EX1014, ¶ [0005] (DePoi); EX1017, ¶ [0020] (Kröhnert).

sheet material web at [a] second drive,” such as when a material web is being advanced into a cutting region and quickly stopped.⁹⁶

48. GEA438 is specifically designed to address these concerns. GEA438 creates transporting resistance for the web material, ensuring that the material is “at all times tensioned...”⁹⁷ The addition of this tension ensures that the material “does not jump from the tape roll 11 or from the deflection rollers 4, or kinks, tears, or backs up.”⁹⁸

49. Dr. Kurfess’s opinion that “[f]or Müller’s buffer 12, sufficient tension would be required for it to operate in the manner described by Müller” is conclusory and unsupported.⁹⁹ Dr. Kurfess does not opine that a POSA would reach this conclusion about Müller, and he certainly does not opine *why* a POSA would reach this conclusion. And as I explain above, a POSA would reach the opposite conclusion: without some (undisclosed) device to maintain a minimum tension, the material in Müller’s loop 12 would experience repeated moments of zero-or-lower tension which would negatively affect the operation and reliability of Müller’s web handling.

⁹⁶ EX1014, ¶ [0005] (DePoi); EX1017, ¶ [0020] (Kröhnert).

⁹⁷ EX1005, ¶ [0030] (GEA438).

⁹⁸ EX1005, ¶ [0030] (GEA438).

⁹⁹ *Contra* EX2007, ¶ 57 (Kurfess Declaration).

e) GEA438's disclosures would improve stability in Müller's web handling device.

50. I disagree with Dr. Kurfess's opinion that "Müller's buffer 12 would not realize the alleged improvements in stability of the web exiting the loop store due to the size and the design of Müller's loop."¹⁰⁰ To begin with, Dr. Kurfess bases this opinion on the "same reasons" discussed above in ¶¶ 45-49, and as I note at ¶ 9, Dr. Kurfess is incorrect that a small loop necessarily operates at a high tension which would protect against potential vibrations or twists. Rather, a POSA would understand that loop 12 is at "exceptionally light tensions," as I explain above at ¶ 9. Further, Dr. Kurfess relies on Müller's disclosures of "very high acceleration" to conclude that Müller, as written, perfectly solves any conceivable issue with high accelerations.¹⁰¹ In my opinion, a POSA would not reach this conclusion. Rather, a POSA would consider how Müller's system might be improved by applying known techniques (such as, in this case, a stabilizing vacuum) from the prior art. Even if a POSA believed Müller was "adequate[]", as Dr. Kurfess states, that does not mean the POSA would be willfully blind to possible improvements.

¹⁰⁰ *Contra*, EX2007, ¶ 59 (Kurfess Declaration).

¹⁰¹ EX2007, ¶ 59 (Kurfess Declaration).

B. Ground 2: The Combination of Müller and DePoi Renders the Challenged Claims of the '823 Patent Obvious.

1. My previous declaration analyzed a proposed combination with particularity.

51. I disagree with Dr. Kurfess's characterization of my prior declaration as only containing a "vague description" of the proposed combination of Müller and DePoi.¹⁰² Rather, my declaration contained thirty-three paragraphs explaining, in a claim-by-claim analysis, where in Müller and DePoi, respectively, a POSA would understand the claimed elements to be taught.¹⁰³ I spent an additional thirty-eight paragraphs explaining why a POSA would be motivated to combine the teachings of Müller and DePoi.¹⁰⁴ I believe that I have described the prior art and the proposed combination with particularity and specificity. To summarize at a high level, I have proposed a combination of prior art that operates using the principles of the interleaver disclosed in Müller along with the vacuum braking functions that are disclosed in DePoi.

¹⁰² *Contra* EX2007, ¶ 80 (Kurfess Declaration).

¹⁰³ EX1003, ¶¶ 290-322 (Jobin Opening Declaration).

¹⁰⁴ EX1003, ¶¶ 323-360 (Jobin Opening Declaration).

2. The teachings of Müller and DePoi are technically compatible.

a) DePoi's vacuum brake teachings are compatible with Müller's buffering system.

52. I disagree with Dr. Kurfess that Müller's "small loop of buffer 12 is fundamentally incompatible" with DePoi's vacuum system.¹⁰⁵ Specifically, I disagree with Dr. Kurfess that "[t]he entirety of DePoi's system includes numerous components that are required for the system to operate such as vacuum box 26 with frame 34 and fans 36 in the base ... The second vacuum system, brake 28, would additionally be required which comprises pneumatic manifold 44, a pneumatic valve 46, a vacuum source 48, and vacuum slots 50."¹⁰⁶ As stated in my deposition, "the disclosure in DePoi, which is different from the disclosure in Müller and therefore, beneficial in combination here, is the vacuum braking portion."¹⁰⁷ In the illustrated embodiment in Figure 6, the vacuum brake "comprises a pneumatic manifold 44, a pneumatic valve 46, and a vacuum source."¹⁰⁸ A POSA would understand that these components, along with vacuum slots incorporated into Müller's contact surface, are the components required to incorporate DePoi's vacuum teachings with Müller.

¹⁰⁵ *Contra* EX2007, ¶ 81 (Kurfess Declaration).

¹⁰⁶ EX2007, ¶ 83 (Kurfess Declaration).

¹⁰⁷ EX2009, 109:23-110:1 (Aug. 27, 2024 Jobin Cross-Examination).

¹⁰⁸ EX1006, ¶ [0029] (DePoi).

53. Dr. Kurfess states that there are “two separate vacuum systems” taught by DePoi and Dr. Kurfess’s analysis of the combination of Müller and DePoi is incorrectly premised on the assumption that both vacuum systems would need to be incorporated into Müller.¹⁰⁹ However, a POSA would understand that only the second vacuum system described by Dr. Kurfess, “brake 28” would be required to incorporate the vacuum brake teachings of DePoi with Müller.

54. Specifically, a POSA would understand that contrary to Dr. Kurfess’s assertion, “[t]he entirety of DePoi’s system” including the “vacuum box 26 with frame 34 and fans 36 in the base” would not be required to incorporate the vacuum brake teachings of DePoi.¹¹⁰ Rather, a POSA would understand Müller’s strip guide 13, without any modification, to be a contact surface. Accordingly, a POSA would understand that vacuum slots, as described in DePoi, could easily be incorporated into Müller’s strip guide to create an air permeable contact surface. In order to create a vacuum brake, the only additional components required are “a pneumatic manifold 44, a pneumatic valve 46, and a vacuum source 48.”¹¹¹ These components could be made small enough to fit within the existing space of stripe guide 13.

¹⁰⁹ EX2007, ¶ 83 (Kurfess Declaration).

¹¹⁰ *Contra* EX2007 ¶ 83.

¹¹¹ EX1006, ¶ [0029] (DePoi).

55. I disagree with Dr. Kurfess that “[i]n addition to these components, an air-permeable surface would be required for the pressure sensor to function.”¹¹² A POSA would understand that Müller’s strip guide 13 modified with vacuum slots constitutes an air-permeable surface and a pressure sensor is not required to meet the claim elements.

56. For reasons discussed in paragraphs ¶ 9, Dr. Kurfess is incorrect that “buffer 12 was designed to be a small, tight loop...” and that “the nature of *Müller’s* buffer 12 [i]s a small loop buffer for fine loop control.”¹¹³ Rather, a POSA would understand the purpose of buffer 12 to be to compensate for differences in acceleration or jerk from intermittently driven roller 14. Further, I disagree with Dr. Kurfess that “[a] POSITA would understand that these required components associated with DePoi’s vacuum brake would not fit at Müller’s buffer 12.”¹¹⁴ A POSA would understand that the components that comprise DePoi’s vacuum brake 28 could easily be made small enough to fit in the area of buffer 12.

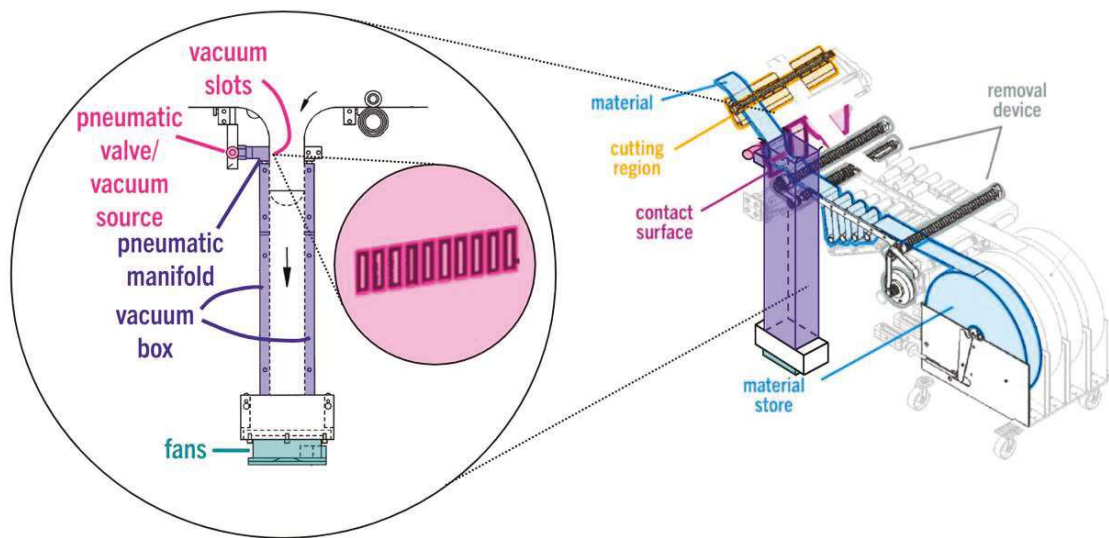
57. Further, Dr. Kurfess’s annotated figure combining Müller and DePoi erroneously includes components of DePoi that are unnecessary to incorporate its vacuum brake teachings, including vacuum box 26, which includes frame 34, as well

¹¹² EX2007, ¶ 83 (Kurfess Declaration).

¹¹³ EX2007, ¶ 84 (Kurfess Declaration).

¹¹⁴ EX2007, ¶ 84 (Kurfess Declaration).

as fans 36 at the base of vacuum box 26.¹¹⁵ Dr. Kurfess's annotations misleadingly use the same colors to label two distinct components: the pneumatic manifold 44 and vacuum box 26. The pneumatic manifold, which would be incorporated into Müller's buffer 12, is substantially smaller than the vacuum box, which would not need to be incorporated into Müller's buffer 12.



EX2007, ¶ 84, Kurfess annotations of Müller Fig. 1 and DePoi Fig. 3.

58. Nor do I agree that DePoi's vacuum brake 28 "impose[s] substantially more complexity to Müller's system and would occupy far more real estate."¹¹⁶ As an initial matter, Dr. Kurfess does not specify what he means by "substantially more

¹¹⁵ EX2007, ¶ 84 (Kurfess Declaration).

¹¹⁶ EX2007, ¶ 85 (Kurfess Declaration).

complexity,” so it is difficult to evaluate his conclusion. Further, a POSA would not understand DePoi’s vacuum brake 28 as imposing substantially more complexity to Müller’s system. Rather, a POSA would understand that pneumatic manifolds and valves are well-known and commonly used in the art, and relatively inexpensive. A POSA would further understand the vacuum source can simply be “a venturi vacuum generator” which is also relatively inexpensive, commonly used in the art, and simple for a POSA to incorporate.¹¹⁷

59. It is not the case that “the nature of DePoi’s vacuum-based system requires a larger material store to accommodate for the use of two vacuum systems than that used of Müller’s buffer 12.”¹¹⁸ As explained in my deposition, “the vacuum brake functionality, not so much the loop – or the loop store” is what is being combined with DePoi.¹¹⁹ This vacuum brake functionality is fully provided by element 28, the “brake.”¹²⁰ It is not necessary to incorporate both vacuum systems of DePoi with Müller.

60. I do not agree that the addition of DePoi’s vacuum teachings would “increase the Müller’s system’s cost as well as increasing the cost of maintaining

¹¹⁷ EX1006, ¶ [0028] (DePoi).

¹¹⁸ EX2007, ¶ 85 (Kurfess Declaration).

¹¹⁹ EX2009, (Aug. 27, 2024 Jobin Cross-Examination) 111:2-4.

¹²⁰ EX1006, ¶ [0028] (DePoi).

and installing the system.”¹²¹ Dr. Kurfess is incorrect that “a POSITA would not expect to have a readily available vacuum source in clean environments such as those Müller’s system targets.”¹²² As explained above in paragraph ¶ 27, Weber is the assignee on patent documents describing the use of vacuum-based devices used in clean environments such as those Müller’s system targets. Even if a POSA did not expect to find a vacuum source available in the food processing environment, a POSA would expect to find a compressed air source which could be connected to a venturi vacuum generator. DePoi specifically teaches that the “vacuum source may comprise, for example, a venturi vacuum generator.”¹²³

61. I disagree with Dr. Kurfess that “[i]mplementing a vacuum chamber would increase the complexity and, therefore, increase the difficulty of cleaning said environment.”¹²⁴

3. A POSA would be motivated to combine Müller and DePoi.

a) A POSA would recognize that DePoi’s vacuum brake offers additional benefits to Müller’s system.

62. I disagree with Dr. Kurfess that “the result of combining the teachings of DePoi with Müller’s buffer 12 would be an added unnecessary and redundant step

¹²¹ *Contra* EX2007, ¶ 86 (Kurfess Declaration).

¹²² EX2007, ¶ 86 (Kurfess Declaration).

¹²³ EX1006, ¶ [0028] (DePoi).

¹²⁴ *Contra* EX2007, ¶ 86 (Kurfess Declaration).

in Müller’s overall system with no advantages.”¹²⁵ Rather, a POSA would understand that DePoi’s vacuum brake teachings are aimed at the same issue addressed by Müller’s buffer 12 while providing additional advantages over the system described in Müller. For the reasons explained in section I.A.2.a, Dr. Kurfess’s explanation of Müller’s two-buffer system is inaccurate. A POSA would understand that Müller’s buffer 12 provides a low-tension supply of web material which can be removed with high acceleration and high jerk by drive 14 rather than merely “a *small* loop used for fine loop control.”¹²⁶ Further, a POSA would understand that the purpose of buffer 8 is to accommodate for temporary differences in speed between drive 6 and drive 11, it is not simply providing “coarse loop control.”¹²⁷

63. It is incorrect that Müller “achieves decoupling in an entirely different manner than DePoi’s double vacuum-based system.”¹²⁸ A POSA would understand that in DePoi the loop functions similarly to Müller’s buffer 12. The vacuum box is located between drives 24 and 30, and the loop “can lengthen and shorten inside the vacuum box 26 due to the motion differential between the two drives 24, 30.”¹²⁹ In

¹²⁵ *Contra* EX2007, ¶ 90 (Kurfess Declaration).

¹²⁶ *Contra* EX2007, ¶ 90 (Kurfess Declaration).

¹²⁷ *Contra* EX2007, ¶ 90 (Kurfess Declaration).

¹²⁸ *Contra* EX2007, ¶ 90 (Kurfess Declaration).

¹²⁹ EX1006, ¶ [0027] (DePoi).

other words, the loop in DePoi functions to decouple the inlet and outlet speeds of the web material. A POSA would further understand that the vacuum brake in DePoi is an alternative method to Müller's buffer 12 of dealing with the high acceleration and high jerk as the web material is provided to the cutting area. As stated in DePoi, "[r]apid deceleration of the web 18 by the second drive 30, such as that encountered in a high speed cutter system, may create a peak inertia load on the web 18 that is significantly larger than the tension force provided by a vacuum box 26."¹³⁰ Accordingly, "[t]he brake 28 has been added to provide a fast responding supplement to the vacuum force 42 during rapid deceleration to maintain sufficient web tension on the web 18 between the brake 28 and the second drive 30."¹³¹

b) DePoi's disclosures would simplify threading in Müller's web handling device.

64. Dr. Kurfess is also incorrect that there are "no advantages" to combining the vacuum brake teachings of DePoi with Müller's buffer 12.¹³² For example, a POSA would understand that the addition of DePoi's vacuum brake would simplify threading of Müller's web handling device. For instance, DePoi's vacuum brake could be used to simplify the threading process because the operator could use the suction effect to temporarily "pin" the interleaver material to the

¹³⁰ EX1006, ¶ [0028] (DePoi).

¹³¹ EX1006, ¶ [0028] (DePoi).

¹³² *Contra* EX2007, ¶ 90 (Kurfess Declaration).

contact surface, freeing the operator's hands to make adjustments to the path of the interleaver material at other points of the machine.

65. A POSA would recognize this as an improvement over the teachings of Müller. Müller discloses that during threading, the strip guide 13 must be rotated into a horizontal position.¹³³ While this allows the interleaver paper to rest somewhat securely on top of strip guide 13, a POSA would recognize that adding a suction effect would make this arrangement even more secure. And a POSA would realize that a suction effect could allow strip guide 13 to be rotated back into its buffering position while threading is still taking place. This would let a machine operator build a loop in buffer 12 during the threading process, saving time during operation because a loop would already exist.

c) DePoi's disclosures would improve tension control in Müller's web handling device.

66. As Müller acknowledges, it is not able to prevent completely "damages, in particular tearing of the interleaver strip" and "unreeling of the interleaver reels."¹³⁴ A POSA would recognize that the teachings of DePoi improve the amount of tension control, leading to less tearing. Brake 28 of DePoi "maintain[s] sufficient web tension on the web 18..."¹³⁵ This tension control "allows proper tracking of the

¹³³ EX1004, ¶¶ [0031], [0048] (Müller).

¹³⁴ EX1004, ¶ [0026] (Müller).

¹³⁵ EX1006, ¶ [0028] (DePoi).

web and provides an accurate sheet length cut with the high speed cutter 20.”¹³⁶ As stated in my deposition, “DePoi is all about [] very precise control over the tension in that loop and the ability to turn that on and off very precisely in the correct timing to facilitate reliable paper cutting.”¹³⁷

67. As discussed in paragraph 9, a POSA would understand that because the ejector roller in Müller is subject to rapid stops, the web material may become completely slack (zero tension or lower) at ejector roller 14 and may therefore “flop and flutter,” “shift,” “wander sideways,” “lose traction,” and experience “wrinkling.”¹³⁸ A POSA would recognize that the implementation of DePoi’s vacuum brake “maintain[s] sufficient web tension on the web 18 between the brake 28 and the second drive 30.”¹³⁹ This can “eliminate wrinkling of the web...”¹⁴⁰

d) DePoi’s disclosures would improve stability in Müller’s web handling device.

68. I disagree with Dr. Kurfess’s opinion that “Müller’s buffer 12 would not realize the alleged improvements in stability of the web exiting the loop store due to the size and the design of Müller’s loop.”¹⁴¹ Maintaining stability of web

¹³⁶ EX1006, ¶ [0028] (DePoi).

¹³⁷ EX2009, 113:16-19 (Aug.27, 2024 Jobin Cross-Examination).

¹³⁸ EX1011, p. 49 (The Mechanics of Web Handling).

¹³⁹ EX1006, ¶ [0028] (DePoi).

¹⁴⁰ EX1006, ¶ [0028] (DePoi).

¹⁴¹ *Contra*, EX2007, ¶ 59 (Kurfess Declaration).

material as it is transported to the cutting region is a common issue in the art. Because of the speed at which web material is transported, without sufficient stability the web material is prone to fluttering, shifting sideways, or wrinkling. A POSA would recognize that the web in Müller's buffer 12, due to the rapid, intermittent increases in acceleration, is vulnerable to these issues of wrinkling or twisting.

69. It is a well-known technique in the arts to provide stability to the web material by placing it against a stationary contact surface. It was further well known in the art that using vacuum brakes can help provide additional stability through increasing the amount of tension between the contact surface and the web material. A POSA would understand the desirability of providing additional stability to material in Müller's buffer 12 through the implementation of a vacuum brake.

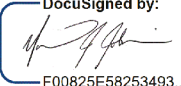
II. CONCLUSION

70. By signing this declaration, I recognize that my declaration will be filed as evidence in a contested case before the United States Patent and Trademark Office's Patent Trial and Appeal Board. I also recognize that I may be subject to cross-examination in the case. If cross-examination is required of me, I will appear for cross-examination within the United States during the allotted time.

71. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be

true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine of imprisonment, or both, under Section 1001 of Title 18 of the United States Code. I am over the age of eighteen years old, and I am competent to make this Declaration.

Date: December 17, 2024

DocuSigned by:

F00825E58253493...

Michael Jobin