In the United States Court of Federal Claims

No. 11-268C
(Filed: December 19, 2024)
UNDER SEAL[1]

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SECURITYPOINT HOLDINGS, INC.,

Plaintiff,

v.

THE UNITED STATES,

Defendant.

* * * * * * * * * * * * * * * * * * *

Bradley C. Graveline, Sheppard, Mullin, Richter & Hampton, LLP, of Chicago, IL, for plaintiff, with whom were *Michelle Song*, Chicago, IL, *Yasamin Parsafar*, San Francisco, CA, *Michael Hopkins*, San Diego, CA, and *Takuma Nishimura*, San Diego, CA.

Brian N. Gross, Senior Litigation Counsel, United States Department of Justice, Civil Division, Commercial Litigation Branch, Washington, DC, with whom were *Brian M. Boynton*, Principal Acting Assistant Attorney General, and *Scott Bolden*, Director, for defendant. *Shahar Harel*, and *Carrie E. Rosato*, of counsel.

OPINION

BRUGGINK, *Judge*.

This is an action for patent infringement brought under 28 U.S.C. § 1498(a) against the United States, acting through the Transportation Security Administration ("TSA"). Plaintiff, SecurityPoint Holdings, Inc. ("SecurityPoint") owns a method patent, U.S. Patent No. 6,888,460 ("the

[1] This opinion is issued under seal. The parties are directed to provide chambers with any proposed redactions of protected material on or before January 13, 2025.

'460 patent"), which we held valid after a trial in 2016. A second trial was held in 2020 to establish the extent of infringement and compensation owed with regard to Category X and Category I airports. Following that trial, we concluded that, no later than January 1, 2008, TSA universally adopted plaintiff's patented method as its default means for screening at all Category X and Category I airports, and thereby, with certain exceptions later adopted, infringed plaintiff's patent. *SecurityPoint Holdings, Inc. v. United States*, 156 Fed. Cl. 750, 750 (2021) (hereinafter "Category X/I Opinion"). We also found that plaintiff was owed a royalty at a rate of two cents per passenger, plus interest, through the date of the judgment as compensation for TSA's unauthorized use of its method. *Id.* at 793–94. We held a third trial in 2024 to establish the extent of infringement and compensation owed with regard to Category II airports. Following post-trial briefing, we conclude that defendant infringed plaintiff's '460 method at nearly every Category II airport. The damages for that infringement total $10,251,601.16 exclusive of delay damages.

BACKGROUND

I. The Patent

The '460 patent concerns a system of recycling trays through security screening checkpoints by use of movable carts. JX 1 (the '460 patent).[2] The '460 patent's priority date is July 3, 2002, which is when the inventor, Mr. Joseph Ambrefe, first filed a provisional patent application at the U.S. Patent and Trademark Office ("PTO"). The '460 patent was issued on May 3, 2005. It expired on November 21, 2023.

The '460 patent is comprised of one independent claim and 14 dependent claims. Claim 1 is the independent claim and is exemplary of the method. It discloses a method comprising:

> a. positioning a first tray cart containing trays at the proximate end of a scanning device through which objects may be passed, wherein said scanning device comprises a proximate end and a distal end,
>
> b. removing a tray from said first tray cart,
>
> c. passing said tray through said scanning device from said

[2] "JX" refers to admitted exhibits offered jointly by both parties. "PX" refers to admitted exhibits offered by plaintiff; "DX" refers to defendant's exhibits.

> proximate end through to said distal end,
>
> d. providing a second tray cart at said distal end of said scanning device,
>
> e. receiving said tray passed through said scanning device in said second tray cart, and
>
> f. moving said second tray cart to said proximate end of said scanning device so that said trays in said second cart be passed through said scanning device at said proximate end.

JX 1 col. 11 ls. 58-59, col. 12 ls. 1-14.

Claim 2 teaches that the scanning device is "selected from the group consisting of a manual inspection station, an x-ray machine, a conveyor belt, and a particulate matter sensor." *Id.* at col. 12 ls. 17-19. Claims 3 and 4 add that the trays are "nestable" and have "exposed sides capable of displaying advertising." *Id.* at ls. 21, 23-24. Claim 6 instructs that the "tray carts are adapted to be rollable." *Id.* at ls. 28-29. Claim 7 adds that the method of Claim 1 also includes "the step of repositioning said second tray cart from said distal end to said proximate end." *Id.* at ls. 31-33. Claims 8 and 9 inform that a plurality of the trays is "adapted to receive" various items such as a laptop, camera, purse, coat, wallet, cell phone, and other similar items. *Id.* at ls. 34-37, 40-41. Claim 12 adds a third cart to be used in the method described in Claim 1. *Id.* at ls. 48-49. Claim 13 inserts a step in which the third cart "containing a plurality of trays" is substituted to replace the first cart. *Id.* at ls. 50-52. Claim 14 makes the bottoms of the trays "adapted to display advertising" on the interior surface of the trays, and Claim 15 teaches that the trays "are adapted to display a tag number." *Id.* at ls. 53-54, 57.

II. Procedural History

Plaintiff commenced this action on May 2, 2011, alleging that the United States, acting by and through the TSA, operates and controls security screening at security checkpoints at the more than four hundred federalized airports in the United States and utilizes carts, trays, and scanning devices at these checkpoints in a manner that infringes one or more of the claims of the '460 patent at all or most of the airports under its control.

The claim construction phase resulted in the following disputed claim term constructions:

The Patent Term	The Court's Construction
tray	a base with upwardly extending walls
trays	no construction
tray cart	a movable cart capable of holding one or more trays
proximate end	proximal or nearest to; referring to the end of the scanning device where an object enters the device
distal end	farthest from; referring to the end of the scanning device where an object exits the device
nestable	capable of fitting compactly within one another
adapted	suited
receiving said tray passed through said scanning device in said second tray cart	no construction

SecurityPoint Holdings, Inc. v. United States, 111 Fed. Cl. 1, 11 (2013).

Thereafter, the parties agreed on and filed two stipulations regarding infringement. The effect of those stipulations was that defendant admitted using the methods of claims 1, 2, 3, 4, 6, 7, 8, 9, 12, 13, 14, and 15 of the '460 patent at ten U.S. airports at least once per day, from January 1, 2008, to the date on which judgment is entered. 156 Fed. Cl. at 755, 762. Those airports are Fort Lauderdale Hollywood International, Dallas/Fort Worth, Phoenix Sky Harbor, Philadelphia International, Boston Logan, Washington Dulles, Portland International, Detroit Metropolitan Wayne County, Baltimore-Washington International, and Ronald Reagan Washington National.

The stipulations did not, however, meaningfully streamline the litigation. The government raised a number of defenses, most of which were resolved by motion practice. The issue of the validity of the patent, namely obviousness, necessitated a trial in 2015. The patent survived as defendant did not prove that a person of ordinary skill in the art would have combined the prior art references to teach the steps of plaintiff's independent claim 1. *SecurityPoint Holdings, Inc. v. United States*, 129 Fed. Cl. 25 (2016). The parties then pursued discovery regarding infringement and damages. They agreed to divide the remaining issues, both for purposes of discovery and

trial, into tranches by size of airport, pursuing first the largest two categories: X and I.

In the X and I airport phase of the case, there was again considerable pretrial motion practice. Defendant was largely unable to substantively respond to plaintiff's discovery requests both because of the complexity of the data and because the relevant metrics were not preserved during the claim period. Other than data about when screening lanes were open, the only direct numeric data that TSA routinely maintained was with respect to passenger throughput. Plaintiff thus repeatedly raised the problem of the dearth of any records at TSA from which the parties could attempt to quantify TSA's use of plaintiff's method or even secondary evidence of use, such as purchase records or training materials. What defendant assembled in lieu of this direct data were declarations from TSA employees, one for each Category II airport, and 20 Rule 30(b)(6) deponents who were made knowledgeable, at least to some extent, on the subject of the use of bins and carts in security screening for all 87 airports at issue.[3] This information did not provide comprehensive or detailed data about the use of plaintiff's patent at each airport, at each lane, and for all relevant periods.

Because of the absence of records, plaintiff asked the court to draw an adverse inference, effectively creating an assumption of comprehensive use at all lanes and all airports, except those at which plaintiff had entered into a licensing agreement. Plaintiff's rationale was that defendant was in the best, and arguably only, position to record what it was doing at TSA's security checkpoints. Plaintiff clearly could not enter into real-time investigation of use of its patents, and defendant had not kept records attempting to gather the relevant data.[4] We were unwilling to simply assume comprehensive infringement, however. Ultimately an adverse inference was not applied, but the court warned defendant that plaintiff was not expected to accept at face value the government's argument that "we didn't use your patent at these airports for this period of time." Tr. at 47:11-19 (Transcript from November 1, 2017 hearing, ECF No. 303). Instead, we required plaintiff to prove as

[3] Each deponent was responsible for four airports, and a few deponents more, in order to cover all 87 airports.

[4] In fact, when plaintiff attempted to investigate the particulars of the defendant's operations at the Denver airport, its representatives,
Mssrs. Ambrefe and Malackowski, were approached by TSA officers and questioned. Because both of these gentlemen then asked questions of the TSA officers, defendant moved for a sanction and exclusion of that potential evidence.

best it could that its method had been adopted as the default method used by TSA, based on TSA's own records. If it could do that, then we held that it would be up to the government to prove particular instances of nonuse, i.e., when the default assumption did not apply. As we put it in 2021, the United States would then have the opportunity to demonstrate "that the use was not universal." 156 Fed. Cl. at 769.

Defendant raised the defense that some of its use was with plaintiff's permission. On March 16, 2020, we granted in part defendant's motion for summary judgment regarding the existence of an implied license from plaintiff to TSA for the use of the '460 method at those airports at which plaintiff had an agreement with the airport operator permitting such use. *SecurityPoint Holdings, Inc. v. United States*, 147 Fed. Cl. 499 (2020). We left open, however, the question of the scope of those licenses in terms of the relevant dates and number of lanes at the airports implicated by our finding of an implied license. *Id.* at 503-04.

Trial regarding infringement at Category X and I airports was conducted in October 2020. We held that plaintiff was owed a running royalty of $0.02 per passenger for the government's use of its patented method. 156 Fed. Cl. at 791-92. Plaintiff proved its method was the default way in which TSA intended and did operate its checkpoints at these large airports. *Id.* at 768. Defendant, however proved certain instances of nonuse, which were then excluded from the damages base. The two such deductions were for use that was permissive and for when TSA used automated systems for tray handling. *Id.* 792-93. Defendant also sponsored a study that showed ways in which security screening lanes at certain airports were operated in ways inconsistent with the patent. *Id.* at 775-77. Although we were unable to apply a deduction across the board for these occasional non-infringing practices, we took them into consideration in setting the royalty rate. *Id.* at 791-92. The result was an award to SecurityPoint of $103,685,510 plus interest, which continues to run.

Following the Category X/I trial and opinion, the parties conducted discovery regarding the next smaller category of federalized airports, Category II. Through April, May, and June 2023, the parties filed various motions for summary judgment and motions in limine. On July 20, 2023, we denied all the motions except for a grant of partial relief as to the government's motion for summary judgment regarding implied licenses, as to which we held that the license implied by plaintiff's agreements with airport operators runs as of the date of the agreement. *SecurityPoint Holdings, Inc. v. United States*, No. 11-268C (July 20, 2023) (unpublished

order) (ECF No. 654). One of the motions dealt with the issue of the lack of evidence regarding use, or nonuse, of the patent, especially as it regarded defendant's allegations of the use of a non-infringing method at certain Category II airports. We found that a spoliation sanction was unwarranted. *Id.* at 3-4. Plaintiff raised the issue at trial and sought the same sanction again in its post-trial papers. Defendant moved to strike that portion of plaintiff's post-trial brief. Both motions are dealt with below.

There were also cross-motions filed on the eve of trial concerning the designation of portions of deposition testimony from 30(b)(6) witnesses. We find those motions moot in light of the parties' agreement to use those transcripts in lieu of live testimony and the fact that we have not relied on information outside the areas of testimony as to which the deponents were offered.

III. Category II Trial

We held trial on January 22-26, January 31, and February 21-23, 2024, on the extent of infringement and damages at 87 Category II airports. Plaintiff presented five live witnesses, two of whom testified as experts. Defendant presented 11 witnesses, one of whom was an expert. We list the witnesses below and give a brief summary of their testimony, while discussing the particulars of their testimony in more detail later.

The parties came to the following agreement regarding the introduction of testimony via deposition in lieu of live witnesses: transcripts of the 20 designated Rule 30(b)(6) witnesses were admitted in their entirety, subject to internal government objections. Plaintiff agreed to forego direct examination of the seven Rule 30(b)(6) witnesses who testified after the agreement was reached.[5] Also, all declarations taken from fact witnesses at the Category II airports were admitted, with plaintiff preserving the option to make arguments regarding the credibility of those witnesses. The parties also agreed that the transcript and exhibits from the Category X/I trial were part of the record in the Category II trial. Closing argument was heard at the end of trial, and the parties have since completed post-trial briefing.

A. Plaintiff's Fact Witnesses

[5] These witnesses were Richard Brennen, David McDermott, Albert Lloyd, Maxine Jermunson, Michael Pommier, Michael Combs, and John Seelmann.

Plaintiff called three fact witnesses:

1. Samuel Bucy[6]

Mr. Bucy is employed by TSA as the Assistant Federal Security Director-Generalist at Huntsville International Airport. Mr. Bucy was designated by defendant as the Rule 30(b)(6) witness for Mobile Regional Airport, Gulfport-Biloxi International Airport, Jackson-Medgar Wiley Evers International Airport, and Huntsville International Airport. He testified about security checkpoint operations and the use of bins and bin carts at these airports.

2. Richard Rzucidlo[7]

Mr. Rzucidlo is employed by TSA as the Assistant Security Director of Screening in South Carolina. Mr. Rzucidlo was designated by defendant as the Rule 30(b)(6) witness for Augusta Regional Airport, Columbia Metropolitan Airport, Greenville Spartanburg International Airport, Myrtle Beach international Airport, and Savannah International Airport. He testified about security checkpoint operations and the use of bins and bin carts at these airports.

3. Anthony Tsantrizos[8]

Mr. Tsantrizos is employed by TSA as the Deputy Division Director of the deployment and sustainment division within acquisitions program management. Mr. Tsantrizos testified about the deployment of equipment at Category II airports and TSA documents, including Checkpoint Design Guides ("CDGs"), Computer-Aided Design ("CAD") drawings, and equipment deployment schedules.

B. Plaintiff's Expert Witnesses

Plaintiff also called two expert witnesses:

1. Dr. Sheldon Jacobson

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[6] Mr. Bucy was also called as part of defendant's case-in-chief.

[7] Mr. Rzucidlo was also called as part of defendant's case-in-chief.

[8] Mr. Tsantrizos was also called as part of defendant's case-in-chief.

Dr. Jacobson testified during the Category II airports trial, as well as at the earlier trial regarding Category X/I airports. Dr. Jacobson has been a professor of computer science and industrial engineering in the College of Engineering at the University of Illinois at Urbana-Champaign since 2006. He began work on aviation security issues in 1995, working with the FAA Office of Civil Aviation Security. His research on multi-level aviation security passenger screening at airports helped in the design and implementation of TSA's PreCheck system and Dr. Jacobson has published in the field of aviation security since 1996. The court found him to be a person of ordinary skill in the art ("POSA") with regard to the '460 patent.

Dr. Jacobson testified as an expert on the extent of use of the patented method by defendant at airport security checkpoints at Category II airports. He relied on TSA CDGs, CAD drawings, and the declarations and deposition transcripts of TSA employees to reach his conclusions.

2. Alexander Clemons

Mr. Clemons is the Managing Director of Ocean Tomo, LLC, an investment banking firm which provides services related to intellectual property, including financial expert testimony, valuation, and patent analytics. He has significant experience in assessing damages for use of intellectual property. Mr. Clemons has both a JD and an MBA. He testified as an intellectual property damages expert and responded to defendant's damages expert.

C. Defendant's Fact Witnesses

The government called seven fact witnesses:

1. Richard Brennen

Mr. Brennen is employed by TSA as the Deputy Assistant Federal Security Director for Screening at Syracuse Hancock International Airport. He was designated by defendant as the Rule 30(b)(6) witness for Atlantic City International Airport, Westchester County Airport, Long Island MacArthur Airport, Fredrick Douglass-Greater Rochester International Airport, and Syracuse Hancock International Airport. He testified about security checkpoint operations and the use of bins and bin carts at Syracuse.

2. David McDermott

Mr. McDermott is employed by TSA as the Deputy Assistant Federal Director for Screening at Harry Reid International Airport serving Las Vegas, Nevada. He was designated by defendant as the Rule 30(b)(6) witness for Fairbanks International Airport, Saipan International Airport, Hilo International Airport, and Juneau International Airport. He testified about security checkpoint operations and the use of bins and bin carts at Juneau.

3. Albert Lloyd

Mr. Lloyd is employed by TSA as the operations manager for the state of Ohio. He was designated by defendant as the Rule 30(b)(6) witness for Akron-Canton Airport, Dayton International Airport, Flint Bishop International Airport, Sioux Falls Regional Airport, and South Bend International Airport. He testified about security checkpoint operations and the use of bins and bin carts at Dayton.

4. Maxine Jermunson

Ms. Jermunson is employed by TSA as the Assistant Federal Security Director for Screening at Billings Logan International Airport. She was designated by defendant as the Rule 30(b)(6) witness for Billings Logan International Airport, Bozeman Yellowstone International Airport, Colorado Springs Municipal Airport, Jackson Hole Airport, and Missoula Montana Airport. She testified about security checkpoint operations and the use of bins and bin carts at Billings and Bozeman.

5. Michael Pommier

Mr. Pommier is employed by TSA as the Lead Transportation Security Manager at Wichita Dwight D. Eisenhower National Airport. He was designated by defendant as the Rule 30(b)(6) witness for Eastern Iowa Airport (serving Cedar Rapids), Des Moines International Airport, Wichita Dwight D. Eisenhower National Airport, and Springfield-Branson National Airport. He testified about security checkpoint operations and the use of bins and bin carts at Cedar Rapids and Des Moines.

6. Michael Combs

Prior to his retirement, Mr. Combs was employed by TSA as the Assistant Federal Security Director-Generalist at Spokane International Airport. He was designated by defendant as the Rule 30(b)(6) witness for Bellingham International Airport, Seattle Paine Field International Airport,

and Tri-Cities Airport (serving Pasco, Washington). He testified about security checkpoint operations and the use of bins and bin carts at those airports.

7. John Seelmann

Mr. Seelmann is employed by TSA as the Deputy Assistant Federal Security Director of Screening at Jacksonville International Airport. He was designated by defendant as the Rule 30(b)(6) witness for Daytona Beach International Airport, Northwest Florida Beaches International Airport (serving Panama City Beach), Pensacola International Airport, Tallahassee International Airport, and Destin-Fort Walton Beach Airport. He testified about security checkpoint operations and the use of bins and bin carts at Pensacola and Northwest Florida.

D. Defendant's Expert Witness

Defendant called one expert witness:

1. Daniel McGavock

Mr. McGavock testified regarding Category II airports, as well as at the earlier trial regarding Category X/I airports. Mr. McGavock has a Bachelor of Science degree in accounting from Indiana University and currently serves as the Vice President of Charles River Associates, a consulting firm. He is the firm's Intellectual Property Practice leader. He is an expert in accounting and in the valuation and licensing of intellectual property. Mr. McGavock testified as to the compensation due to SecurityPoint and responded to plaintiff's damages expert.

IV. Fact Findings

Before discussing the evidence in this case, we note the difficulty for both parties, as well as the court, inherent in this phase of the case. There are 87 Category II airports at issue, each requiring separate findings and evidence. Most of these airports were in existence for the entire relevant period (2008 through almost the end of 2023). Establishing what happened with respect to use of plaintiff's patent was particularly problematic given the practical limitations of trial time, the logistical difficulties of organizing potentially dozens of witnesses, and the volume of potentially relevant documentary evidence. To alleviate some of this difficulty, the parties agreed to streamline the necessary proof by offering declarations from TSA witnesses for each airport and 20 designated Rule 30(b)(6) depositions. Some

of the deponents were called at trial, but the number of live witnesses was greatly reduced from the 100-plus it would have otherwise taken to cover the issues at each Category II airport.

A. Plaintiff's Proof of the Extent of Infringement

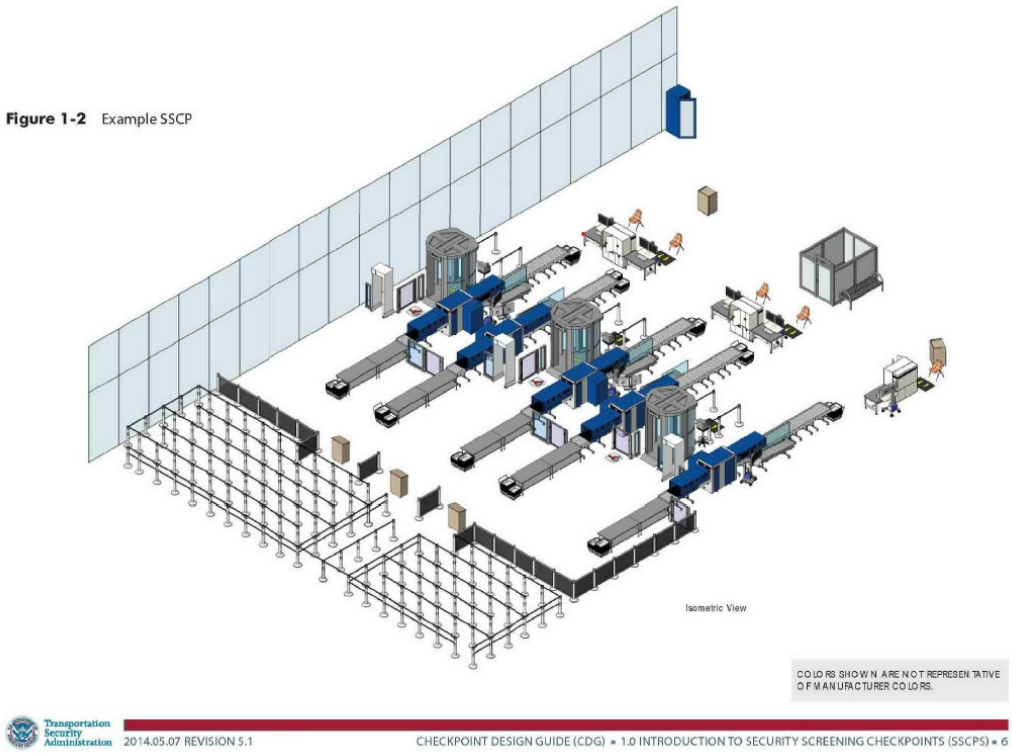
Plaintiff relies on four types of evidence to establish a presumption that its patent was the default method of screening used at Category II airports: CDGs, admissions by TSA employees, CAD drawings, and expert testimony.

1. Checkpoint Design Guides

As we stated in our Category X/I opinion, TSA is responsible for the design of airport security checkpoints. It therefore periodically issues or updates CDGs[9] that direct the configuration of airport security lanes at all Category X/I airports as well as Category II airports. Plaintiff contends that these guides, which airport designers must use in laying out security screening checkpoints, are proof that use of plaintiff's patent is built into the very structure of virtually all screening lanes. Mr. Tsantrizos, the Deputy Division Director of the Deployment and Sustainment Division within TSA's Acquisitions Program Management branch, testified that the CDGs "include the equipment and how a checkpoint should be designed by an architect and engineer firm." Tr. 1257:1-2.

TSA published design guides in 2009, 2014, 2016, 2020, 2022, and 2023, all of which were admitted into evidence. The following diagram from the 2014 CDG is illustrative:

[9] These documents were renamed as "Checkpoint Requirements and Planning Guide" ("CRPG") in 2018.



JX 130 at 14. The 2009, 2014, and 2016 CDGs all contain the figure above, showing an example of a security screening checkpoint with trays and carts at the proximate and distal ends of each lane. The 2020, 2022, and 2023 CRPGs include similar figures depicting checkpoint configurations with trays and carts at the proximate and distal ends of lanes. *E.g.*, DX 2389 at 45.

Defendant responds that the CDGs are merely theoretical because they relate solely to checkpoint design, not checkpoint operations. It contends that the CDGs merely "provide guidance to architects and engineers during the design process for a checkpoint," and do not "govern checkpoint operations or provide any instruction to operations personnel." Def. Post-Tr. Br. 4. To the extent local airports might have configured their checkpoints in a manner inconsistent with the CDGs, defendant had the opportunity to provide that information, and for a limited subset of airports, it did so, as discussed below. As to the others, we are entitled to assume that the designs were binding and implemented.

Defendant also argues that the CDGs do not disclose all the steps necessary for use of the claimed method: "The 2009, 2014, and 2016 CDGs do not dictate returning the second cart to the proximate end of the same scanner, merely stating that 'TSA recommends that bin carts be pushed

upstream.' *See* JX-2001-0026, JX-121-0046, JX-130-0032." Def. Post-Tr. Br. 5. As we stated in our Category X/I opinion, however, we can make the "logical inference . . . that the reason the carts are 'pushed upstream' is to return the trays to the proximate end of the scanner, thus accomplishing the last step of Claim 1." 156 Fed. Cl. at 765 (quoting a CDG). We infer the same here. As explained by Dr. Jacobson, discussed below, each step of the method is disclosed by the CDGs. During the present trial, the court asked Mr. Bucy, the Assistant Federal Security Director at Huntsville Airport ("HSV"),[10] whether the CDGs outlined an "assumed process" of how the security screening checkpoint would work.[11] Tr. 503. Mr. Bucy affirmed that notion and took it further by clarifying that, although CDG's were only a guide, if TSA was confronted with a checkpoint that local designers contemplated setting up in such a way as to make the tray and cart process impossible, TSA would insist that the design of the checkpoint be re-worked to include the necessary elements. Tr. 503-04. We find that the CDGs are very persuasive evidence of comprehensive use of the '460 patent at all Category II airports.[12]

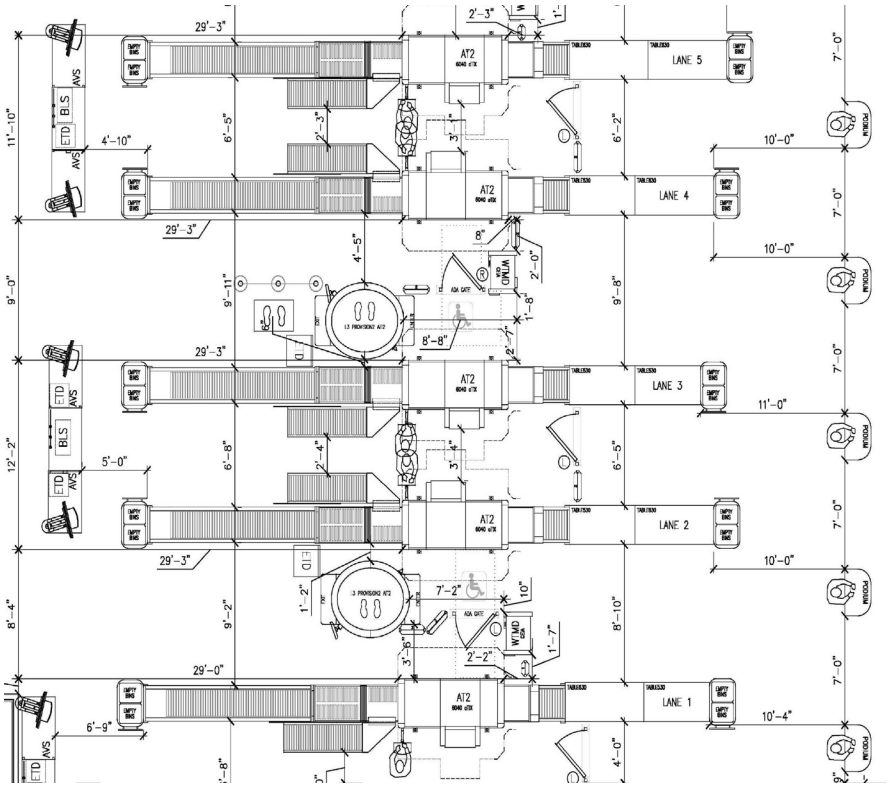
2. Computer-Aided Design ("CAD") Drawings

During trial, we admitted 326 CAD drawings into evidence, depicting 85 of the 87 Category II airports at various points in time. There are three types of CAD drawings: (1) concept drawings, showing where the designer intended that the equipment be placed; (2) "issue for construction" drawings, showing what would be required for permitting; and (3) record, or as-built, drawings, showing what the area looked like at the end of the construction project. The overwhelming majority of these drawings depict the location of tray carts at the proximate and distal ends of each lane. For example:

[10] Hereinafter we refer to the airports by their three-letter codes. A legend defining the codes is appended to this opinion.

[11] Mr. Bucy was designated by defendant as a 30(b)(6) witness, knowledgeable regarding four airports, including his home airport of HSV, MOB, JAN, and GPT.

[12] To be clear, Mr. Bucy did not believe that the CDGs mandated placement of "ancillary equipment" (trays and carts) in specific locations, Tr. 505, but when asked whether they would generally be placed at the beginning and end of a scanning device, he confirmed that was the case as those locations made sense "operationally," Tr. 508.



E.g., JX 2020 at 4 (November 10, 2020 Record Drawings for PGD). Page 2 contains a legend explaining that the double rectangle shapes at the end of each lane depicted are "bin carts." *Id.* at 2. When magnified, the bin carts at each end of the lanes on page 4 reveal the words "empty bins" written inside the graphic for the bin carts. *Id.* at 4. Additionally, all of the record drawings include a note directing operators to "provide bin carts at each end of each lane." *E.g.*, *id.* at 2 note N.

Although defendant is correct that CAD drawings are not a depiction of the state of any particular security checkpoint on any particular day—they are not photographs—they are, however, like the CDGs, clear evidence of TSA's intent to set up the checkpoints in a manner consistent with the use of plaintiff's method. In the absence of any comprehensive contemporaneous evidence to the contrary for hundreds of Category II checkpoints around the country for the claim period, the CAD drawings, along with the CDGs, constitute strong evidence of TSA's intent to incorporate the '460 method into the design *and operation* of the checkpoints.

3. Admissions

Plaintiff also relies on statements from TSA employees to support its infringement claims. SecurityPoint cites admissions of infringement from

all twenty 30 Rule 30(b)(6) witnesses and from 73 TSA employee declarations. For example, Mr. Bucy, a Rule 30(b)(6) witness, testified at his deposition that each step of the '460 patent was practiced in Lanes 1 and 2 at MOB from January 1, 2008, through the date of his deposition. DX 2256 at 67-69 (affirming that each step of the method could be practiced at those lanes). Another example comes from the testimony given by Maxine Jermunson for BZN, at which she testified that each step of the '460 method could have been practiced at lanes 1-5 from 2011 forward. *See* DX 2247 at 123-28.

The TSA declarants are even more direct. By way of example, Sam Sheesley confirmed that, at COS, carts are in place at each end of the scanners and that bins are stored on them. DX 2023 ¶ 10. "For all Lanes, the bin carts are usually moved." *Id.* ¶ 11. We take this to mean that they are moved to recycle the trays given his statement in paragraph 14 that "[i]n addition to carts, TSOs will sometime return bins by hand from the sterile area to the non-sterile area."[13] The Declaration of Victor Romeo includes an admission that the patented method has been used at AVP since approximately 2005 or 2006. *See* DX 2009 ¶¶ 8-12 (again confirming that bins on carts are present on both sides of the scanners and that the Transportation Security Officers ("TSOs") recycle the bins by moving the carts). The other declarations are nearly identical with the exception of the different examples of asserted nonuse or alternate configurations, all of which we discuss in detail later. Overall, however, plaintiff's point is well taken: the TSA employee statements confirm that the vast majority of screening checkpoints are set up to infringe and are operated, at least some of the time, in the manner taught by the patent.

We heard testimony live at trial to this same effect. Mr. Rzucidlo told the court how the bins and carts were arrayed at lanes 1 and 2 at CAE and how the bins could be picked up from a cart, passed through a scanner, then restacked on a cart on the other side of the scanner, and then finally brought back to the non-sterile side by moving the cart. Tr. 583. He then confirmed that this was the method of operation at CAE from 2008 forward. *Id.* At lane 3, it is sometimes the method when that lane is not operated as a dedicated PreCheck lane. *Id.* at 584. The same was true at GSP from 2015 to present at lanes 2-4. *Id.* at 586-88.

Defendant's response is that these statements do not answer the question of whether infringement in fact happened at any of the Category II

[13] "Sterile" refers to the end of a lane after the scanning device, and "non-sterile" refers to the end before the scanning device.

airports at any particular time because the witnesses only admitted to the "possibility of infringement during these time periods and at these lanes," because many of the admissions are framed as "this can occur" statements rather than "this does occur" statements. Def. Post-Tr. Br. 8. They are thus insufficient, argues the government, even when taken with the CDGs and CAD drawings, to establish any incident of infringement. We disagree, and we further note that these shortcomings are of defendant's making. It is wholly unfair to demand the sort of conclusive proof that defendant demands when the government was wholly unable to provide it in discovery.

Though some of the admissions from TSA employees, particularly the 30(b)(6) deponents, are framed in conditional terms (indicating only the possibility of the patent's use), that does little to decrease their probative value on the question of whether the '460 patent's method was the default *modus operandi*. In any event, most of the TSA declarants' statements are neither conditional nor speculative. They affirm that the method was actually used. We know from the design guides that the security checkpoints were set up to use the patent's method. And, even the few exceptions defendant has been able to prove, such as hand carrying of bins, confirm that, most of the time, the patent was being practiced. In those instances of nonuse, the carts were available for use and the lane remained set up to practice the method whenever it suited TSA. The implication of that evidence is clear: though the witnesses could cite examples of individual TSA employees not practicing the method, the default, institutionalized method was to use it. The lanes were set up to do so, and many of the witnesses confirmed that it was done. We turn next to the expert testimony which buttresses these conclusions.

4. Expert Testimony

At trial, plaintiff called Dr. Jacobson to confirm the extent of defendant's use of the patented method at airport security checkpoints. Dr. Jacobson is a professor in the School of Engineering at the University of Illinois and began work on aviation security issues in 1995. He has significant professional experience on aviation security issues, including numerous publications and advisory work with the Federal Aviation Administration. During the Category II trial, the court accepted him as an expert in the areas of security screening checkpoints, industrial engineering, and aviation security, and also accepted him as a person of ordinary skill in the art with regard to the '460 patent.

In its post-trial brief, plaintiff provided a chart comparing claim 1of the '460 patent to language in the guides, which we find a fair use of both:

Claim 1	Design Guides
A method comprising:	
positioning a first tray cart containing trays at the proximate end of a scanning device through which objects may be passed, wherein said scanning device comprises a proximate end and a distal end,	"A fully loaded bin cart should be located at the start of the divest tables on the nonsterile side of the lane awaiting passenger pick up." (JX 2001-0027; see also JX 0130-0032; see also JX 0121-0046) "Bin carts are similar to a hand cart or dolly to transport a large number of bins without requiring excessive lifting or carrying by a TSA agent from the X-ray extension rollers on the sterile side of the lane to the divest tables on the non-sterile side of the lane." (*Id.*) "Each lane requires at least two bin carts per lane and TSA recommends maintaining about 60 bins per lane." (JX 2001-0027.) "Each lane requires a bin cart at each end." (JX 01300032; see also JX 0121-0046.) Carry-on bag screening "can be accomplished by three different types of x-ray equipment …" (JX 2001-0029.) Carry-on bag screening "can be accomplished by deploying AT1 or AT2 equipment." (JX 0130-0034.) Carry-on bag screening "is accomplished by deploying AT equipment." (JX 0121-0048.) Carry-on bag screening includes a "[s]canning [b]elt." (JX 2001-0029; *see also* JX 0130-0034; JX 0121-0048.) "Two bin carts are typically positioned at the front of the screening lane…" (DX-2389.059; see also JX 20760059.)

removing a tray from said first tray cart,	"Bins are the gray containers at the front of the checkpoint lane used for divesting of passenger personal belongings such as purses, carry-on bags, backpacks, laptops, shoes, coats/jackets, etc." (JX 2001-0027; *see also* JX 0130-0032; JX 0121-0046.)
passing said tray through said scanning device from said proximate end through to said distal end,	"Feed the passenger bins to the scanning belt at the infeed tunnel." (JX 2001-0029.) "The divest table allows passengers to slide their bins to the infeed of the X-ray." (JX 0130-0033; *see also* JX 0121-0047; DX 2389.056; JX 2076-0056.)
providing a second tray cart at said distal end of said scanning device,	"The other bin cart should be positioned at the end of the roller tables on the sterile side so that the TSA agent can collect empty bins after passengers have picked up their belongings." (JX 2001-0027; *see also* JX 0130-0032; JX 0121-0047.) "…and two are positioned at the end of the screening lane." (DX-2389.059; *see also* JX 2076-0059.)
receiving said tray passed through said scanning device in said second tray cart, and	"The other bin cart should be positioned at the end of the roller tables on the sterile side so that the TSA agent can collect empty bins after passengers have picked up their belongings." (JX 2001-0027; *see also* JX 0130-0032; JX 0121-0047) "…and two are positioned at the end of the screening lane." (DX-2389.059; *see also* JX 2076-0059.)
moving said second cart to said proximate end of said scanning device so that said trays in said second cart be passed through said	"TSA recommends that bin carts are pushed upstream against passenger flow through an ADA gate..." JX 20010027; *see also* JX 0130-0032; JX 0121-0047.

scanning device at said proximate end	"In the past, bin cart [sic.] transport by TSOs was a primary cause of on-the-job injuries. Hand-carrying of bins is no longer endorsed by TSA." JX 2001-0027; *see also* JX 0130-0032; JX 0121-0047. "Bin carts are wheeled carts used to stack and transport large numbers of bins." (DX-2389.059; *see also* JX 20760059.)

Pl.'s Post-Tr. Br. 8-9. This chart is based on work performed by Dr. Jacobson, as he testified in the first trial and again in this trial. *See generally* Tr. 142-46 (claim 1); 147-48 (dependent claims).

As he did for the Category X/I airports in the previous trial, Dr. Jacobson analyzed the claim limitations of the '460 patent in view of the language of the CDGs and concluded that each limitation in claim 1 was met. Similarly, Dr. Jacobson compared claims 2–4, 6–9, and 12–15 of the '460 patent with the CDGs and came to the same conclusion, namely, that each limitation of the '460 patent was met by the design guide language.

Dr. Jacobson began his analysis with the first CDG, published in 2006 (JX 2002). That design guide "talked about different methods of cycling or recycling trays or bins . . . and at that point they said we have two alternatives. One was a roller system . . . and one was tray carts." Tr. 144. In contrast, the 2009 CDG (JX 2001) "focused entirely on tray carts." Tr. 144-45. The design guide "provided step-by-step use of tray carts" (Tr. 144), which Dr. Jacobson found matched entirely the '460 patent. He testified that he looked for, but was unable to find, any documentation permitting deviation from the trays and carts method in the CDGs. Dr. Jacobson's review of the 2020 and 2023 CRPGs showed that the placement of tray carts was the same as shown in the previous CDG diagrams. Thus, in Dr. Jacobson's view, the CDGs called for infringement of the '460 patent. Based on the CDGs, the Rule 30(b)(6) witness depositions, the declarations from TSA employees, and other evidence provided by TSA, he concluded that there "was widespread, universal infringement of the patented method" at Category II airports. Tr. 107.

Dr. Jacobson testified that he searched for, but did not find, any evidence showing that TSA has not practiced claim 1 of the '460 patent at Category II airports from January 1, 2008, through the expiration of the patent in 2023. He also testified that his opinion of comprehensive

infringement also applied to the asserted dependent claims of the patent, Tr. 147, and that he found no evidence to suggest that TSA did not infringe the dependent claims during this same time period, Tr. 148.

Defendant discounts Dr. Jacobson's opinions because of his lack of experience within TSA or with CDGs or CAD drawings:

> But Dr. Jacobson lacks any foundation to render opinions regarding infringement, TSA procedures, or TSA's use of internal documents. He has never been employed by TSA. *See* Tr. 117:25–118:18. He has never worked in checkpoint operations. *See* Tr. 118:1923. He did not visit a single airport in connection with this litigation. *See* Tr. 261:8–11. He had never seen a CDG or a CAD drawing prior to this litigation, *see* Tr. 265:13–15, 342:1–4, nor ever talked to a TSA employee about CDGs or CAD drawings.

Def. Post-Tr. Br. 9. The government did not, however, offer any contrary expert opinion regarding the CDGs or CAD drawings.

As we explained in our Category X/I opinion and as we set out above, Dr. Jacobson has extensive experience with airport security. He is a person of ordinary skill in the art of security screening operations. We view him as competent to interpret the design guides and apply them to the method of the patent. Although he has never been a TSA employee, he has worked with TSA and been immersed in the airport security world for several decades. Ultimately, we find his testimony persuasive in terms of whether any other method than the patented one has been used during the relevant period at TSA-controlled airports.

5. Summary of Plaintiff's Proof of the Extent of Infringement

As we did after the Category X/I trial, we acknowledge the difficulty of quantifying use in this case. The government was in position to keep data on its use of the method and should have done so, at the very least, since this litigation began in 2011, but it did not.[14] Based on the evidence summarized above, we find that plaintiff has carried its burden of proving that its patented method became the default means used by TSA for screening passengers at security checkpoints at all Category II airports. Thus, as before, the government must pay for the infringement at the airports unless it can show

[14] Plaintiff put TSA on notice of its patent as early as 2005. 156 Fed. Cl. at 768.

by a preponderance of the evidence that TSA did not in fact practice the method, at all, for specific periods of time at specific lanes.

B. Defendant's Evidence of Nonuse

Defendant presents the work of its expert, Mr. McGavock, who reviewed the collected declarations and 30(b)(6) testimony of TSA employees and identified statements he asserts establish nonuse of the patent. He then categorized these instances of nonuse and used them as deductions to be applied against the throughput at the Category II airports for certain periods of time, as applicable per the witnesses' testimony.

The first exception is nonuse when bin carts were not placed at both the proximate and distal ends of each lane at a checkpoint. Mr. McGavock divides this evidence into several different categories based on whether the nonuse was for a specific period or for a specific lane at a checkpoint, etc.

A second exception discussed extensively at trial arose when bins were carried by hand rather than moved by bin cart. There was evidence that Transportation Security Officers would sometimes carry bins from the distal to proximate ends of lanes instead of moving them with a bin cart. Hand-carrying is a category of nonuse of the patent regardless of whether bin carts are present at the proximate and distal ends of a lane because the bin carts are not moved as required by the '460 patent. We note, however, that hand carrying does not preclude TSA from concurrently using plaintiff's method. In fact, the evidence establishes that almost of the hand carrying took place when TSA was also circulating bins by cart according to SecurityPoint's method.

A third claimed exception is the use of bin islands. Discussed in our first infringement trial, this configuration involves bin carts placed in between two lanes, and the bins can be used by passengers of both lanes. At some airports, bin islands would be between lanes at the proximate end; at others, they would be at the distal end; and in at least one instance, at both ends. With such a configuration and when both lanes on either side of a bin island are operating simultaneously, there is the possibility of bin crossover, i.e., a bin cart going from the end of Lane A to the beginning of Lane B. In such an instance, the closed-loop aspect of the '460 patent is not infringed. "It is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized." *Roberts Dairy*

Co. v. United States, 530 F.2d 1342, 1354 (Ct. Cl. 1976). In our Category X/I opinion, we found that where "bins from the distal end of one lane are returned to the proximate end of another lane," this constitutes nonuse of the '460 patent. *SecurityPoint*, 156 Fed. Cl. at 777. Thus, in a bin island configuration with bin cart crossover, there is no infringement. We note, however, that the mere placement of bin carts in between the two lanes is insufficient to establish nonuse of the patented method in the absence of proof of both lanes operating simultaneously.

Another exception is the operation of PreCheck lanes at which bin carts are not placed at the proximate and/or distal ends of a lane due to the lower number of bins used.[15] We discuss this type of lane configuration more extensively in the damages section of this opinion, but we note here that a PreCheck lane is presumptively non-infringing only where the lane itself is set up to be non-infringing—i.e., bin carts are not placed at the proximate and/or distal ends of a lane. The mere designation of a lane as a PreCheck lane does not make it non-infringing, however, if all of the elements of infringement are present.

Plaintiff attempts to discount defendant's use of the declarations and depositions to prove nonuse by identifying inconsistencies, highlighting the vagueness of dates and estimates, and arguing that many of the instances are uncorroborated by any other evidence. For our purposes, we agree with defendant that witness testimony, when not directly contradicted, is strong evidence of the use or nonuse of the patented method here. Thus, where there is uncontradicted testimony from either a declaration or deposition of nonuse, we accept such evidence as proof of non-infringement.[16] Mr. McGavock's use of this evidence as it pertains to inferences drawn therefrom and the

[15] At the first trial, throughput for Automated Screening Lanes ("ASLs") was deducted from the base, but the experts agree that no ASLs were installed in Category II airports during the period relevant here.

[16] This is true to the extent that we are satisfied that the declarant has personal knowledge of the nonuse. This consideration is particularly relevant as it pertains to the timeframe for each asserted period of nonuse at an airport. Discussed in detail below, in some instances, the airport declarants spoke in general terms of nonuse, but their experience at that airport was limited to some subset of the damages period.

quantification of deductions from throughput is a separate question that will be treated below.

DISCUSSION

I. Infringement

We find that the evidence detailed above is sufficient to confirm that plaintiff has met its burden to prove a presumption of universal and continuous infringement by defendant of plaintiff's patent at all Category II airports. The CDGs and CAD drawings establish the default method, and, in the absence of other evidence, they create a presumption that the method in the '460 patent was used. This comports with the testimony from Mr. Mason from the first infringement trial, in which he described the CDGs as mandatory for the configuration of checkpoints.[17] The documentary evidence is also backed up by the multitude of witness statements indicating the use of the method at almost all of the category II airports.[18] We leave for the damages discussion the correct number of deductions proved by defendant.

II. Damages

That leaves only the question of damages. As explained in the first infringement trial, the appropriate measure of damages is a running royalty. 156 Fed. Cl. at 781. The parties agree that we should continue to use the royalty rate model and that there would have been only one hypothetical negotiation for all use of the method. *See* Pl.'s Post-Tr. Br. 30; Def.'s Post-Tr. Br. 28. Defendant's evidence of nonuse will be considered, as appropriate, in setting the base and the royalty rate.

A. Royalty Rate

The parties agree that there would have been a single hypothetical negotiation for all Category X, I, and II airports and it would have occurred

[17] Mr. Tsantrizos at the most recent trial described Mr. Mason as more knowledgeable about CDGs than himself. Tr. 1254.

[18] There are three airports at which, as explained below, carts have not been used during the life of the patent.

in September 2005. Although both parties' damages experts used the same royalty as that set at the prior trial in their calculations of damages, defendant now urges that a lower rate is appropriate for use at Category II airports.

In the Category X/I opinion, we conducted a *Georgia-Pacific* analysis to determine the appropriate royalty rate. The *Georgia-Pacific* opinion sets out a "list of evidentiary facts relevant, in general, to the determination of the amount of a reasonable royalty for a patent license." *Ga.-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified and aff'd*, 446 F.2d 295 (2d Cir. 1971). The court there noted that "there is no formula by which these factors can be rated precisely in the order of their relative importance or by which their economic significance can be automatically transduced into their pecuniary equivalent." *Id.* at 1120–21. The court is not "constrained" by the *Georgia-Pacific* factors and need not consider factors that are "inapposite or inconclusive," *Brunswick Corp. v. United States*, 36 Fed. Cl. 204, 212 (1996) (citing *Ga.-Pac. Corp.*, 318 F. Supp. at 1120), and the parties are thus not required to address all fifteen factors. When the court considers the hypothetical negotiation, some "factors may be of minimal or no relevance to a particular case and other factors may have to be molded by the Court to fit the facts of the case at hand." *Procter & Gamble Co. v. Paragon Trade Brands, Inc.*, 989 F. Supp. 547, 607 (D. Del. 1997).

Of the fifteen *Georgia-Pacific* factors, one or both parties dealt with the following:

> (1) The current, established royalty rates under the patent at issue.
> (2) The royalty rates for comparable technology.
> (7) The duration of patent and license terms.
> (8) The profitability and commercial success of the invention.
> (9) The utility and advantages of the invention over prior art.
> (10) The nature, character, and benefits of use.
> (11) The extent and value of infringing use.
> (13) The portion of realizable profits creditable to the invention alone.
> (14) Expert testimony on royalty rates.
> (15) The totality of other intangibles impacting a hypothetical negotiation between a willing licensor and licensee.

156 Fed. Cl. at 782. When considering how the *Georgia-Pacific* factors should influence the hypothetical negotiation, we can consider facts that

post-date the time of the negotiation. *Sinclair Refining Co. v. Jenkins Petroleum Process Co.*, 289 U.S. 689, 698 (1933). The Supreme Court termed these facts "the book of wisdom" and cautioned that courts should not ignore them. *Id.* As we noted in the Category X/I opinion, these facts "relieve some of the artificiality inherent in the exercise by tethering what is otherwise a pure hypothetical to reality." 156 Fed. Cl. at 782.

We began with the $0.06 per passenger rate derived from the Adason agreement and, after considering the several relevant *Georgia-Pacific* factors, found an appropriate royalty rate of $0.02 per passenger. *Id.* at 791-92. Plaintiff argues that the parties would have treated Category II airports the same as Category X and I airports and urges us to adopt the same $0.02 per passenger royalty rate adopted earlier. Mr. Clemons, plaintiff's valuation and damages expert at this Category II stage, offered seven reasons why the same rate would apply across all three categories of airports. One his most salient points was that the Adason agreement, upon which we relied at the first trial to set a baseline for our consideration of the issue, involved several (two out of five) Category II airports. Tr. 1511-12 (Clemons).

Mr. Clemons also pointed out that many of the reasons we found to reduce the Adason rate apply to Category II airports: the parties' relative negotiating positions; the non-patent contributions; the long duration and large base of the running royalty; and the various unquantifiable "leakage points" described at the first trial, namely bin crossover and PreCheck lanes. *E.g.*, Tr. 1511-14. Another crucial factor for Mr. Clemmons was his opinion that TSA faces the same capacity and wait time issues at Category II airports as it does at the larger airports, and it tracks the wait times the same way across all three categories. *See* Tr. 1514-16, 1521. We agree that all of these factors militate in favor of applying the same $0.02 per passenger royalty rate.

Defendant argues that the parties to the negotiation would have treated Category II airports differently and urges the court to adopt a lower rate. It did not, however, provide any technical or damages testimony on the point. Its damages expert, Mr. McGavock, in fact, used the $0.02 rate for his calculus. The government argues that this two-cent figure establishes a ceiling for damages but that the court could and should use a lower royalty rate. In its post-trial brief, defendant revives its argument from the Category X/I phase of this case that the Adason agreement was not a meaningful starting point for the royalty rate determination, but we see no reason to

reconsider that issue. *See* 156 Fed. Cl. at 783-84 (considering the parties' arguments regarding Adason and finding it a relevant starting point for the consideration of the royalty rate). Defendant's chief argument is that the extent of use is significantly less at Category II airports, which is to say that, because fewer passengers would be using the lanes practicing the method at these airports, the parties would have agreed to pay less for use at these smaller airports.

While we recognize the significant difference in throughput between the two larger categories and the Category II airports, we view this as a difference in quantity, not in kind. The use of a running royalty already accounts for this sort of quantitative difference in that the government will pay an order of magnitude less for its use of the patented method for Category II airports than it would for the larger categories without adjusting the rate. The difference in magnitude of use is thus already accounted for by using a running royalty license.

In sum, we decline to conduct a new *Georgia Pacific* analysis. We find that the parties would have negotiated the same $0.02 per passenger rate across all three categories of airports at issue. Crucially, as opined by Mr. Clemons, the use of the simple, consistent $0.02 royalty rate allows for ease and flexibility in administering the license payments over a relatively long period. Tr. 1529-31. As the use goes up, so does the payment, and vice versa. Further, TSA already collects the only data necessary to account for the license, namely passenger throughput, and it could thus easily be audited. Tr. 1531. Finally, the royalty rate accounts for certain unquantifiable instances of nonuse of the patent. In the absence of a better method, the running royalty will serve that purpose.

B. The Base

The rate decided, we need only find the base against which it is to be applied to arrive at the compensation figure. Both Mr. Clemons and Mr. McGavock apply the same damages methodology of total passenger throughput, less any quantifiable deductions for nonuse, to arrive at a royalty base. Between January 1, 2008, and August 2022, 706,097,588 passengers

passed through Category II airports security checkpoints.[19] The only real disagreement is the extent of deductions that should be made.

1. Deductions

The parties agree that licensed use must be deducted. They disagree as to whether any other deductions are appropriate.

a. Agreed Deductions

Consistent with our prior holdings, both Mr. Clemons and Mr. McGavock make a deduction for throughput at airports with implied licenses from plaintiff. The parties agree on the airports and date from which those agreements run. The following table details the six airports and origination dates of the agreements:

Airport	**Agreement date**	**Exhibit No.**
CHA	May 15, 2007	DX 2266
ICT	July 13, 2007	DX 2265; PX 128; PX 1688
MHT	January 17, 2012	DX 2267
TLH	November 15, 2011	DX 2268
TYS	August 1, 2007	DX 2269
XNA	May 22, 2012	DX 2264

The parties disagree, however, as to whether two of the agreements expired prior to the end of the damages period. Assuming no such expiration, Mr. McGavock calculated the throughput covered by the implied licenses at 47,135,041 passengers.

Mr. Clemmons testified that SecurityPoint's advertising agreements at MHT and TLH were terminated prior to the patent's expiration. He thus uses a smaller number for the implied license deduct. We are unpersuaded, however. As defendant points out, no evidence to that effect was offered at trial. Defendant, on the other hand, has produced evidence found in the

[19] Due to differences in the timing of report drafting, Mr. Clemons and Mr. McGavock have differing throughput numbers. We use Mr. McGavock's throughput numbers for consistency within this opinion, but the parties agree that the final throughput numbers will need to be trued up to reflect the actual TSA passenger throughput as of the date of patent expiration.

agreements themselves establishing the implied license at these airports. The termination clauses of those require written notice to the other party. *See* DX 2667 at 6; DX 2268 at 6. The agreements do not otherwise contain an expiration date. There is no record evidence of the termination of those agreements prior to the patent's expiration. We cannot assume it. Mr. McGavock's deduction will be used for the implied license.

b. Disputed Deductions

The remaining eight categories of deductions made by Mr. McGavock are disputed by plaintiff. We consider each in turn.

i. Bin carts have never been used at an airport.

Three of the TSA declarants stated that bin carts have never been used at their respective airports. They are Gary Myers at GSN (DX 2045), David McDermott at JNU (DX 2062), and James Crockert at ROA (DX 2094). Mr. McGavock thus removed from his calculation of the base all throughput for these three airports, totaling 15,630,834 passengers.

Plaintiff's only response is that the CAD drawings for each of these airports depict the placement of tray carts at both ends of the scanning device. Given this contradictory evidence, plaintiff argues that we should not rely on these declarations. We disagree.

Messrs. Myers, McDermott, and Crockert were unequivocal that tray carts have not ever been used at their airports. This is because, as they explained, the space constraints unique to these airports make it a physical impossibility or severe nuisance to use tray carts. We take these statements at face value. Although TSA may have intended to use carts at those airports, as evinced by the CAD drawings, these witnesses explained that, in practice, they were not used, and they explained why. The deduction is thus appropriate.

ii. Bin carts have never been used at a particular lane.

Mr. McGavock's second category of deduction is for certain lanes at certain airports where declarants stated that bin carts have never been used. He deducts a total of 5,196,462 passengers from eight airports: BGR, DAB for one lane from 2015 forward, DSM for two lanes that came online in 2013,

EYW for one lane from 2022 to the present, FAT for one lane, ILM for one lane from 2009 forward, PAE for one lane from 2019 to the present, and SRQ for one lane from 2016 to the present. Each of these deductions is based on a declaration and, in the case of seven of the airports, deposition testimony as well. These lanes are PreCheck lanes.

Plaintiff's generalized response to this evidence is again that CAD drawings and the CDGs contradict these witnesses. Plaintiff also points out that the presence of PreCheck lanes is one of the unquantifiable factors considered by the court when it set the royalty rate. During the first trial, defendant presented evidence from its motion study expert that the '460 patent's method was infrequently practiced at PreCheck lanes. Although we declined to accept the percentage deduction posited by Mr. Tarakemeh, we relied on this evidence as a reason to reduce the royalty rate. 156 Fed. Cl. at 775-76, 792. That being the case, plaintiff argues that any deduction from throughput for passengers who went through a PreCheck lane would give the government a double deduction for the same nonuse (once in the rate and once in the base). Plaintiff also challenges the general quality of the declarations as imprecise, especially as it concerns the timeframe to which testimony relates.[20] It also questions the bias of the declarants as TSA employees.[21]

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[20] Plaintiff also takes aim at Mr. McGavock's approach to calculating lane-by-lane throughput numbers for any category where deductions are made only for specific lanes because the throughput data available was not available on a lane-by-lane basis. We find this criticism unavailing. Plaintiff's post-trial brief seizes on certain statements in Mr. McGavock's expert report, but that report is in evidence only as a demonstrative exhibit. Plaintiff did not pursue on cross-examination the imprecision in the calculations it now argues. We are not able to second-guess the numbers on a basis not presented at trial. Though his methodology was not perfect, Mr. McGavock explained what he did and how he did it. His method in this respect was generally understandable and reasonable under the circumstances. Defendant's burden in proving these deductions is only to a reasonable certainty.

[21] We decline to give any consideration to the latter argument. The live witnesses were credible, and to the extent we can make a credibility determination from the declarations and depositions, we find them devoid of any reason to question the sincerity of the witnesses' belief that their recollections were true.

In the abstract, we have no problem with this category of deduction. The depictions of these lanes in the CAD drawings evinces a general intent to use trays and carts. The more direct evidence from the TSA declarants, however, presents us a different picture of the actual operation of these lanes. Further, there is a distinction between defendant's evidence and use of the existence of PreCheck lanes in this trial versus the Category X/I trial. In the prior trial, the given reason for the deduction was not that carts were not present—meaning that the method could not be practiced at that lane—but instead that passengers were not divesting as many items or may not have divested any at all. *See* 156 Fed. Cl. at 772-73 (discussing Dr. Tarakemeh's use of PreCheck as a deduction). In this trial, the evidence is that, for these PreCheck lanes, no carts were present at one or both ends of the scanner. This distinction merits treating, where proven, the throughput at these lanes as non-infringing. That does not mean, however, that we can accept all of Mr. McGavock's deductions in this category as the quality of the evidence supporting the asserted deductions differs from airport to airport. We examine all eight in this category.

For BGR, Mr. Cossar's declaration (DX 2010) establishes that no carts were used at a particular lane until it was closed either in 2010 or 2011. Mr. McGavock deducted 31,724 passengers for this nonuse. This deduction is appropriate. The same does not hold for DAB, however. Mr. Russo's declaration (DX 2025) records his statement that Lane 2, a PreCheck lane, does not utilize carts currently. Although he has been employed at DAB since 2012, his statement is not clear with respect to what period the Lane 2 PreCheck use applies. In fact, the 30(b)(6) witness for this airport, John Seelmann, testified that Mr. Russo was not entirely sure when carts were or were not used at this lane. *See* DX 2244 at 179-80 (testifying that Mr. Russo was not clear but that, currently, carts were not used at the PreCheck lane). Defendant would have us infer that no carts were used since the advent of Lane 2's status as a PreCheck lane. We cannot make that inference, however, given the generality of Mr. Russo's statement and Mr. Seelmann's explanation that Mr. Russo was not clear as to the time when carts were not used at Lane 2. Defendant has thus not proven the timeframe that this deduction should apply to, and it cannot thus be made.[22]

[22] Mr. Russo's statement, along with others like it, do support the continued use of PreCheck lanes as a reason to reduce the royalty rate to the $0.02 that we used previously.

As to DSM, Mr. Menke reports in his declaration (DX 2028) that lanes 5 and 6 are PreCheck lanes and do not currently utilize tray carts. He further explained that, prior to the elimination of carts at these lanes, only one cart was used because of insufficient space at one end of the scanner. Although he has been employed at this airport since only 2018, we are prepared to infer that the method was not used at these lanes at the airport since they were brought online in 2013 given Mr. Menke's explanation that there is not and has not been room for two carts at those lanes.[23] Mr. McGavock deducted 1,048,067 passengers for this deduction, and we find that appropriate.

For EYW, Ms. Huczko's declaration (DX 2033) records that Lane 3, opened in March 2022, is a PreCheck lane, and does not have tray carts. She also reports that bins are not available for use by passengers unless dispensed by TSA screeners at that lane. We are thus convinced that the deduction for throughput at this lane from March 2022 forward is appropriate. Mr. McGavock found 16,151 passengers for whom this deduction applies.

In his declaration (DX 2033), Daniel Knott, states that the first lane at FAT is a PreCheck lane and TSA does not employ carts there. Mr. McGavock deducted all throughput at that lane since 2008. Mr. Knott's declaration is not so clear, however, because he does not state how long this has been the case. At his deposition (DX 2329), he testified that he began his duties covering the FAT airport only in 2020. In neither his declaration nor deposition does he clarify whether or how he knows the state of affairs prior to his tenure. Accordingly, we cannot agree with this deduction.[24]

At ILM, Mr. Baker reports in his declaration that no carts are used at Lane 3. Mr. Baker has worked at ILM for TSA since 2002. We therefore fully credit his statement and allow this deduction. Mr. McGavock deducts 5,867 passengers for this lane. The same result obtains for the claimed deduction at PAE, where Mr. Hanich has been employed by TSA since the airport was opened in 2019. He reports in his declaration (DX 2082) that the

[23] It is safe to assume that the airport, and the screening area, was not larger prior to Mr. Menke's tenure. There was no evidence of a remodeling project.

[24] And we are unable to filet Mr. McGavock's numbers to give a partial deduction from 2020 forward because we do not have in evidence yearly figures for throughput for particular lanes.

infrequently used first lane does not use carts to store bins. We thus find Mr. McGavock's deduction of 36,169 appropriate.

The last airport in this section is SRQ. Mr. Smith, who has worked at the Sarasota airport since 2021, declares (DX 2103) that the dedicated PreCheck lane, Lane 1, has not used carts since 2016. It is unclear, however, how he knows that, as he arrived five years later. The declaration provides no further details. We thus cannot adopt any deduction for Lane 1 at SRQ because there is in evidence no yearly breakdown of each lane's throughput with which we could arrive at our own figure for post-2021 use.

Although there are several airports for which we cannot credit defendant a deduction due to the apparent lack of personal knowledge of the declarants, the government has proven that certain of these PreCheck lanes do not use plaintiff's method. The total for this category of allowable deductions, per Mr. McGavock's calculations, is 1,137,978 passengers, which we adopt.

iii. Bin carts were not used for a certain time period.

The next category of deductions was taken for throughput at airports as to which defendant asserts, based on the TSA employee declarations, that bin carts were not used prior to a particular date. For this, the largest of his categories, Mr. McGavock deducts a total of 83,201,273 passengers, representing calculated throughput at 46 airports.

This category, like the last, is particularly difficult to assess due to the individualized nature of the evidence for each airport. Defendant relies entirely on declarations from fact witnesses to assert dates that correspond to the time periods when bin carts were or were not used. In some instances, the 30(b)(6) deposition transcripts lend additional support for particular airports. Plaintiff, for its part, would have us discount these declarations entirely as unreliable because they are uncorroborated and occasionally contain minor contradictions, either with other documents, such as lane open minutes (the minutes shows a different number of lanes open at a particular time than recalled by the deponent), or between the attached photographs and the declarant's statements, e.g., regarding the placement of bins at a screening lane. Having reviewed those contradictions, we are unconcerned because they are minor and, more importantly, do not cast a shadow on the

statements regarding the advent of tray carts at these 46 airports. That is not to say, however, that we accept all 46 deductions.

SecurityPoint highlights 27 of the 46 airport deductions in this category as based on fatally vague testimony. We have examined each and find that most of them are backed by reliable statements, and sometimes explained or supported by the corresponding 30(b)(6) deposition testimony, and thus defendant is credited with those deductions. There are several exceptions, however, and we discuss them here.

The first regards BLI. Defendant submitted the declaration of Curt Koplitz (DX 2013), in which Mr. Koplitz declares that carts have been used since 2013. That dating is problematic, however, as Mr. Koplitz has only worked for TSA at BLI since 2018. We thus looked to the 30(b)(6) deposition covering this airport for further information. Michael Combs was the government's deponent covering BLI. He was asked about Mr. Koplitz's knowledge of that 2013 date for carts. He explained that he and Mr. Koplitz had spoken with a Mr. Alberto Vasquez, who has worked at the airport since 2002. Combs admitted that Mr. Vasquez picked the 2013 date due to his memory of carts coming to BLI around the same time as a terminal renovation at BLI in the 2011-2013 timeframe. *See* DX 2429 at 93-94. "And as a result of that, that's why he can only recall using bins starting in 2013, because he could actually attach his memory to . . . that particular event." *Id.* at 94. He was then asked whether Mr. Vasquez could "recall with certainty" whether carts were not used earlier. The answer was "no." *Id.* Given the lack of personal knowledge of Mr. Koplitz, the declarant, and the imprecision of Mr. Vasquez's memory, from which the 2013 year was generated, we cannot rely on that date nor can we pick our own. Any deduction for BLI is thus inappropriate.

We reach a similar result for the JAC deduction, which is based on the declaration of Oscar De Los Reyes (DX 2060). Mr. Reyes is an Assistant Federal Security Director ("AFSD") and has served in that capacity at JAC since 2020. He declares that bin carts came into use at JAC in 2010 after a remodel. He was, however, not working at the Jackson Hole airport at that time. The declaration thus clarifies that the 2010 date came from another TSA employee, Aimee Crook, who has been at JAC since 2002. DX 2060 ¶ 3. The 30(b)(6) deposition of Maxine Jermunson, which covers JAC, does not provide further useful information. She was asked for the basis of Mr. Reyes' knowledge in this regard, and she merely restated that Ms. Crook

provided that information. DX 2247 at 144-45. She was also asked whether Ms. Crook looked for any documentation to back up that recollection, and the answer was "I did ask Ms. Crook if she had any records. She said no, there would be no way to find that." *Id.* at 145. We find the evidentiary basis for this deduction to be insufficient. The declaration evinces a lack of personal knowledge. The 2010 date is the product of hearsay embedded in the declaration. Plaintiff did not waive such objections to the declarations. We thus looked to the 30(b)(6) deponent for additional information or indication of trustworthiness of the 2013 date, but we found none. Given that, the JAC deduction will not be allowed.

Next is the deduction claimed for pre-2010 throughput at MDT. This deduction was based on the declaration of Bradley Kendall, who stated that carts have been used at MDT "since at least 2010." DX 2068 ¶ 12. Though Mr. Kendall would have personal knowledge, because he has been at MDT since before 2009, *see id.* ¶ 2, we find that a deduction of all passengers before 2010 to be inappropriate. We cannot tell whether Mr. Kendall was certain that carts were not used prior to 2010. "Since at least 2010" leads us to believe that to be a guess. There is no other information provided in his declaration that might suggest an event anchoring that date in his memory, nor is there any additional information in the associated deposition of Michael Kline (DX 2250). We do not have a firm enough date to exclude prior throughput to make a deduction. Thus, none can be taken for the MDT.

We turn then to MLI, as to which Robert Schlessinger provided a declaration and was deposed as a 30(b)(6) witness. He has been at MLI, near Moline, IL, since 2015. He states that carts have been used there since 2010. DX 2075 ¶ 9. It is unclear how he would know that. At his deposition, he was asked how he came up with the 2010 date. His answer: "We linked it to the arrival of the Federal Security Director and that it was his idea to bring – introduce the bin carts to our operation." DX 2255 at 178. He explained that the date was drawn from the advent of carts at another airport in his purview, Peoria (PIA). He did not, however, ask anyone whether carts had been used at MLI prior to 2010 nor make any attempt to find documents linked to that date. *Id.* at 179. While that linkage might appear, at first blush, to provide context, further review of Mr. Schlessinger's deposition transcript, however, gives the court pause.

He was asked how he came up with the date for the introduction of carts at the Peoria, IL airport (PIA). He explained that he spoke with Mr.

Johnson, an AFSD for MLI, Peoria, and Rockford, and Mr. Johnson recalled that the idea to use carts at Peoria came with the arrival of the new Federal Security Director Ricky Gordon, "sometime after his arrival in 2010." *Id.* at 49. What this tells us is that Mr. Schlesinger informed himself, via Mr. Thompson, regarding the year that carts were introduced at PIA. When it came to providing a year for the same event at MLI, he used the same date. We do not view this as the product of a reliable recollection from Mr. Schlessinger or Mr. Johnson regarding MLI. The deposition transcript does not reveal whether Mr. Thompson had the same recollection regarding carts at MLI as he did for them at PIA. In addition, Mr. Gordon was neither a witness nor a declarant in the case. We thus find the date provided by Mr. Schlessinger unreliable for any deduction at MIL.[25]

Regarding Mr. McGavock's deduction for pre-November 2010 passengers at PSC in Pasco, WA, we find no deduction appropriate. That date was based on the declaration of Micheal Creech (DX 2087), who stated that carts were used since November 2010. Mr. Creech, however, has only been employed as the Transportation Security Manager ("TSM") at PSC since 2013. Before that, he was stationed at other airports. *See* DX 2087 ¶¶ 1-2. The 30(b)(6) deponent for PSC, Michael Combs, clarified that Mr. Creech obtained this information from another TSM, Andy Rheaume, who began at PSC in March 2010. DX 2429 at 156 (Creech Depo.). Mr. Creech, however, did not report knowing or learning that information himself. We thus find that Mr. Combs' 2010 date was not based on any personal knowledge and that reliance on the embedded hearsay in his declaration would be inappropriate. No deduction will be made for pre-2010 throughput at PSC.

Even more problematic is the deduction claimed for SFB. Sean Roman stated in his declaration that carts have been used there "for at least

[25] The same is not true of the deduction for PIA, however. In that instance, Mr. Schlessinger's use of Mr. Thompson's recollection was appropriate. The deposition transcript gives us enough context for how that date was determined by Mr. Thompson. The 30(b)(6) deponents were allowed to educate themselves on airports outside of their own personal experience and to share that knowledge at their deposition. Plaintiff agreed to waive hearsay objections at trial for embedded statements used by the deponents to educate themselves. *See* ECF No. 667 (order of Nov. 8, 2023). Plaintiff did not waive such objections to hearsay embedded in the declarations, however.

10 years." DX 2100 ¶ 10. He could have no personal knowledge of that fact, however, because he has only been employed by TSA at SFB since 2017. Nor does the deposition of Robert Smith help. Mr. Smith testified that the did not know how Mr. San Roman could know that nor did Mr. Smith make any attempt to find out how. *See* DX 2254 at 171. No deduction for this category is appropriate for the SFB airport.

The same problem exists for defendant's deduction for pre-2010 passengers at SGF in Missouri. There, AFSD-Generalist, Charles Kirkland, reports that bin carts have been in use since 2010. DX 2101 ¶ 10. He arrived at SGF in 2012, however. Micheal Pommier, the government's 30(b)(6) deponent for SGF fares no better. He thought Kirkland began at SGF in 2011, but assumed, nevertheless, that he was accurate in declaring 2010 to be the relevant start date. He did nothing himself to try to verify or independently come up with a date for the beginning of cart use at SGF. *See* DX 2251 at 68. Nor did he ask Mr. Kirkland how Kirkland came to know about the screening operations procedures prior to his arrival. *Id.* at 57-58. Mr. Pommier's deposition, in fact, revealed his general disinterest and lack of inquisitiveness regarding the topics at hand. We thus cannot rely on his or Mr. Kirkland's recollection to supply a date for the advent of bin carts at SGF, and no deduction can be made for this category there.

In summary for this category, there are seven airports for which we cannot credit any deduction to the government. For BLI, Mr. McGavock's calculated deduction was 2,136,018 passengers; for JAC it was 632,623; for MDT his number was 1,428,043; at MLI the deduction was 1,047,514; at PSC the total for this deduction was 834,092; at SFB it was 3,143,112; and lastly, at SGF, Mr. McGavock came up with 2,181,530 passengers. The total comes to 10,408,598. We thus reduce Mr. McGavock's total throughput deduction for this category by that number: 83,201,273 less 10,408,598 is 72,802,674. Defendant has thus proven that it is entitled to reduce the royalty base by 72,802,674 for this category of deductions.

iv. Only one bin cart was used.

Mr. McGavock's fourth category of deduction was for throughput at lanes at which only one bin cart was used for a certain period of time. He deducted 57,040,742 passengers from 23 airports. For eight of the airports in this category, where the reason cited by the declarants for the use of only one cart was that it was a PreCheck lane, plaintiff again argues that this is an

improper double deduction. We have dealt with this above and disagree. For 12 of the airports, plaintiff attacks McGavock's extrapolation of lane data from more general information. Again, we have dealt with that criticism above and disagree with it, with one exception discussed below. Also cited again in response to this category are the CAD drawings. Again, we do not find this a reason to ignore the declarations which report only one cart used for particular periods at particular lanes.

Although some of these declarations regarding when certain lanes used only one cart are estimates, at best, we are prepared to credit them. For PreCheck lanes, we have the date from TSA when PreCheck lanes were in operation, and so the math is not in question. Some other declarations gave indications why a particular lane was not using two carts, such as space constraints, and that lends credibility to those statements. In fact, we are prepared to credit all of the deductions in this category save those that include throughput deducted for the period 2008-2012. As SecurityPoint points out, Mr. McGavock admitted on cross-examination that he did not have the "minutes open" date prior to 2013. Tr. 1833-34. This was a critical component to his lane-by-lane calculations. Thus, any airport in this category that includes throughput deducted on a lane-by-lane basis prior to 2013, we discard as unreliable.[26]

For that reason, deductions for the following airports in this category will be excluded from the deduction total: ACY because the lane-specific deductions begin in 2012; FNT's deduction for Lane 3 includes throughput prior to June 2022, necessarily including throughput from years prior to 2013; HRL's deduction is based on Lane 2 from 2008 to the present; ILM includes two lanes from 2009 forward; at JAC, the deduction includes Lane 4 from 2010 to 2022;[27] LBB because part of its category 4 deduction was for

[26] Defendant's attempt to rehabilitate Mr. McGavock's pre-2013 numbers is unavailing. The government cites Mr. McGavock's report to explain how he came up with those numbers, but, again, that report is not in evidence as substantive proof of any matter asserted. Mr. McGavock did not testify on this issue other than his admission that he did not have the data prior to 2013.

[27] Although the category 4 deduction for JAC also includes Lane 3 from a brief period in 2022, we necessarily must reject all of the deduction because Mr. McGavock's charts and tables are not in evidence for the truth of the matter asserted therein. He did not testify with specificity as to the particulars of each deduction at each airport. He only gave his airport-by-airport

Lane 1 in 2010-2011; at STT, throughput at Checkpoint Charlie from 2008 to the present. We reject all the deductions for these airports because we do not have Mr. McGavock's underlying figures from which we could extract the throughput numbers for years unaffected by this problem (the lack of minutes for open data prior to 2013). Thus, the whole deduction is excluded for airports in this category.

The total of those disallowed deductions is 17,928,848 passengers. We then apply that number against the total 57,040,742 passengers that Mr. McGavock found for this deduction, and we come up with 39,111,894. We find that defendant has proven a deduction to the royalty base for 39,111,894 passengers representing lanes where two carts were not used for certain periods of time.

v. MPCs were used.

The fifth category of deductions posited by defendant is for lanes that used moveable pallet carts ("MPCs").[28] We discussed this method at length in our Category X/I opinion and determined that the use of MPCs was non-infringing. 156 Fed. Cl. at 779. Mr. McGavock deducted 12,853,895 passengers from six airports: BTV, EYW, IWA, LEX, PIE, and ROC.

Plaintiff's argument against this deduction is essentially that the statements in declarations and depositions are uncorroborated by any contemporaneous documents. Plaintiff points out that in the Category X/I phase of the case defendant produced purchase records to support its MPC argument. For this trial, neither Mr. McGavock nor any witnesses offered such documents. This contrast in the evidence leads SecurityPoint to conclude that the TSA employee statements cannot be trusted, and it urges the court to draw an inference that, if the documents had been searched for and produced, they would have been negative to the government's use of MPCs as a partial defense to infringement. Despite the lack of records, we disagree and find this deduction appropriate.

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summaries. We are again unable to pull apart his numbers and reach an appropriate figure for this deduction at JAC.

[28] In our Category X/I opinion, we referred to this either as the MPC system or the one-cart method.

Although the total lack of contemporaneous records is puzzling, and several witnesses admitted that documents existed which never made their way to plaintiff in discovery, we are not persuaded that the declarations should be ignored.[29] There are also contradictory CAD drawings for three airports, but, as explained above, we find the witness statements more compelling for specific instances of nonuse. We credit the declarant's statements that MPCs were used at BTV from January 2019 through April 2019; EYW for two lanes, beginning in 2018; IWA for six lanes at different times; LEX for three lanes for certain periods; at PIE MPCs were used at two lanes from March 2019 to October 2020 and at two more lanes from March 2019 to the present; and for ROC there is proof of discrete periods of MPC use from January 2019 to February 2022 for five lanes and January 2019 until March 2020 for another lane. The total for this allowable deduction from the royalty base is 12,853,895 passengers.

vi. Bin islands were used.

The next category of deduction is for bin islands. As mentioned above, bin islands occur when bin carts are placed between lanes, allowing crossover of bins and potentially for carts between the two lanes. In that instance, the operation of one or both of the lanes is non-infringing because, "whether at the proximate or distal end of a lane, use of such bin islands constitutes a different method . . . because the trays circulate across the lanes." 156 Fed. Cl. at 771. There are 14 airports as to which TSA declarants state that bin islands were used at certain lanes for certain periods. Mr. McGavock treated the presence of a bin island as proof of non-infringement at both lanes neighboring the island. This means that he deducted 100 percent of any throughput at any lane next to a bin island for the entire period specified by a declarant. This resulted in a deduction of 60,201,838 passengers from the royalty base.

Plaintiff responds in three ways. The first is common to several categories, namely that this phenomenon has already been accounted for in the rate. The second response, also common to several categories, is that

[29] Nor can we draw the broader adverse inference sought by plaintiff in its post-trial briefing. There has been no showing of the necessary scienter or culpability of mind to impose such a sanction. *See Presky v.United States*, 139 Fed. Cl. 196, 209 (2018) (stating that an intent to deprive is a necessary predicate to imposing a spoliation sanction).

CAD drawings depict carts at the end of the lanes for eight of the 14 airports in this category, which calls into question the declarations, according to SecurityPoint. Third, plaintiff argues that Mr. McGavock's 100 percent deduction is wholly inappropriate given that the TSA's data respecting the minutes when lanes were open reveals that in substantial and in some cases a majority of time only one lane bordering an island was open. In such a case, we cannot assume that the operation of that lane is non-infringing.[30] The key to the non-infringing use is the crossover of bins from one lane to another. As we explained in 2021, bin crossover due to islands is a different method because the system is no longer a closed loop as described the '460 patent. *Id.* at 777.

Mr. McGavock's 100 percent deduction for all periods when a bin island was in place is thus inappropriate. He admitted that his method of calculation was agnostic as to whether only one lane at an island was operating, and he made no attempt to adjust for the fact that this was often the case. *See* Tr. at 1829-30. We therefore cannot rely on his figures and no deduction can be credited for this potential nonuse.[31]

vii. Hand-carrying or other catch-all nonuse.

In this category, Mr. McGavock deducted throughput where declarants estimated a percentage of time that trays were hand carried or any other way was used to return them to the non-sterile side of the scanner. Mr.

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[30] Defendant attempts to respond to this point in its post-trial brief by arguing that bin islands are non-infringing for another reason: that they are between lanes rather than at an end of the lanes. That is a distinction neither borne out by the evidence nor the claim construction of the patent. The TSA declarations place the islands at either or both ends of a lane/scanner. *E.g.*, DX 2092 ¶ 12 ("However, on the non-sterile side, a group of four bin carts is placed between Lanes 2 and 3."). As we explained in 2013, the patent's use of the terms "proximate end" and "distal end" is not so precise as to pinpoint the ends to the physical spot adjacent to either end of the scanner. 111 Fed. Cl. 1, 11. The patent uses the term "end' in a general sense, as did the declarants, to place something in vicinity of one side of the scanner or the other, i.e, the proximate (non-sterile) or distal (sterile) end.

[31] And, in any event, bin islands are a contributing factor in our leakage-based reduction of the royalty rate.

McGavock applied these estimates percentages against all throughput for any implicated lane. This category resulted in a deduction of 39,983,594 passengers from 12 airports. We find this category of deductions inappropriate, however, because, other than with one exception noted below, the fact that occasional hand carrying took place at a lane otherwise set up to infringe does not mean that TSA was not otherwise practicing the method. In addition, the calculation is too imprecise to credit.

Although the declarants for these 12 airports cite hand carrying of bins and estimate how often this might be the case, either at a lane or whole checkpoint, *e.g.*, DX 2101 ¶ 11 (Charles Kirkland estimating that bins were carried back to the non-sterile side 30 percent of the time at SGF), we can nevertheless say with certainty that SecurityPoint's tray and cart method is otherwise being practiced at the same time at the same lanes. The fact that, simultaneously, some TSA agents were returning trays by hand does not mean that government is not simultaneously using the patent. If the evidence establishes that TSA was using the method at a particular airport, or lane, and we find that it does, then TSA must pay for it. TSA is the infringer and the appropriate method for quantifying damages is the running royalty applied per passenger. The evidence establishes that it is infringing when these passengers passed through these checkpoints. The government must therefore pay for its use of plaintiff's method during this period at these lanes, unless defendant quantifies particular nonuse.

We are also unwilling to apply a deduction for hand carrying because the percentages of throughput deducted by Mr. McGavock for each airport are entirely the product of anecdotal guesses. Defendant produced no records, no studies, or videos that might lend credence to any of these guestimates.[32] Other than one exception we deal with next, we find the numbers for this deduction unreliable.

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[32] These estimates are also unclear on their face. When a declarant estimates that bins were hand carried "95 percent of the time," DX 2063 ¶ 10, does this mean that, for every 100 bins, 95 bins were hand carried? Or does it mean that TSA agents hand carried bins for 95% of the day? Given the ebbs and flows of passenger volume at Category II airports, these estimates could result in very different throughput deductions. Part of the deduction for STT is for all lanes at Checkpoint Alpha. Although this would otherwise be appropriate, there are also percentage-based deductions for other lanes included in Mr. McGavock's total deduction for STT. We do not have clear

For MFR, the nature of the asserted deduction is different because it is based on a declaration that establishes that the patent's method was not used at all for a specific period of time—hand carrying was universal, despite the presence of carts. This deduction was calculated by Mr. McGavock to be 4,845,214 passengers, which should be removed from the royalty base.[33]

viii. Bins not stored on bin carts.

Mr. McGavock's final category of deduction was taken for instances in which bins were stored somewhere other than bin carts (i.e., on or underneath the divestiture tables). He deducted 6,104,546 passengers from two airports: AMA and VPS.

This deduction was based on statements in the declarations in which declarants estimated how often passengers took bins from the divestiture tables instead of from the supplied carts. For AMA, defendant points to the declaration of Charme Hiers, in which she reports that, although both lanes at AMA use the patented method, TSA also stores bins under the divestiture tables. She estimates that passengers use the under-the-table-stored trays about 40 percent of the time at Lane B and 50 percent of the time at Lane A. *See* DX 2005 ¶¶ 10-11.

Similarly, at VPS, the declaration of Kevin Metcalfe, reveals that bins are also placed under the divestiture table. It is unclear whether this refers to all four lanes at VPS or just one. He goes on to declare that, how bins move through the checkpoint changes "[d]epending on the volume of passengers and the dynamics of the checkpoint." DX 2109 ¶ 11. He provides an

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proof of how those numbers breakout across lanes, and thus the deduction cannot be credited.

[33] Three other airports present similar claimed scenarios of total nonuse, but we find the evidence regarding those airports insufficient. At SYR and UPS, the declarants stated that space constraints made hand carrying the general practice and the movement of the carts a rare occurrence. Defendant claims a total deduction for those airports. Though the use may be rare, that sort of description falls short of establishing total use of a different method and there is no means of extracting specific periods of nonuse. At GRB the evidence supports a finding of total nonuse for particular lanes, but the deduction period includes pre-2013 throughput, for which Mr. McGavock admitted he did not have adequate data.

estimate that these changing dynamics result in a 50 percent usage of bins from under the table. *Id.*

We decline to use these statements. Even if we fully credit the percentage estimates, which we do not, the statements are not grounded in time. Thus, as with Mr. Tarakemeh's work in the prior trial, we cannot apply a percentage deduction going back to the beginning of the damages period based on a present-day impression of the extent of nonuse. *See* 156 Fed. Cl. at 777. We only know what these two individuals estimate to be the percentage of use of on-table-stored bins at the time the declarations were made. It would be fundamentally unfair to apply those estimates backwards in time. Mr. Metcalfe's declaration proves the point. His statement that the dynamics of the checkpoint are constantly changing leaves us doubtful that any meaningful estimate could be applied over time to the VPS airport. We have no reason to think the same is not true at AMA. We find these deductions unsupported.

Lastly, as with the hand carrying category, this deduction is inappropriate because the fact that passengers take some bins from tables rather than from carts tells us nothing about whether the method was being practiced by TSA at the same time. The evidence establishes that it in fact was. To be clear, when TSA places bins on or under tables, it is not practicing plaintiff's method. But this is an exception to the general practice. TSA continues to infringe by storing the rest of the bins in the carts and recycling them, after passing through the scanner, from the distal end back to the proximate end. TSA's storage of some bins on the divestiture tables only means that some number of bins leak out of the closed loop system. Critically, the rest of the bins continue to be recycled through the system in the manner taught by the patent. TSA continues to infringe at those lanes, and the best means for measuring infringement is a per-passenger royalty. No deduction for storing bins on or under tables is appropriate because TSA continues to infringe, and we cannot rely on the percentage deduction proposed by defendant.

c. Deductions Conclusion

At the conclusion of its proposed deductions in its post-trial brief, defendant also posited that there was evidence of other unquantified nonuse at the Category II airports. It also asserted that a type of automated bin return system was installed at AMA and PNS in March and August 2023

respectively. As plaintiff points out, however, it is unclear how the court could use either of these assertions as Mr. McGavock quantified no deduction for either of them.[34] To the extent that the uncategorized and unquantified instances of nonuse would have been apparent to the parties at the time of the hypothetical negotiation, such instances have already been considered in setting the rate. In any event, we have no means of applying a deduction for unquantified nonuse.

Ultimately, we find that deductions for categories 1 and 5 should be deducted in whole from the royalty base of passengers, as calculated by Mr. McGavock. We find that categories 2, 3, 4, and 7 are appropriate in part, and we find no deduction to be merited for Mr. McGavock's sixth and eight categories. The allowed deductions sum as follows:

Category 1 – 15,630,834
Category 2 – 1,137,978
Category 3 – 72,802,674
Category 4 - 39,111,894
Category 5 – 12,853,895
Category 6 – 0
Category 7 – 4,845,214
Category 8 – 0

The total deductions for nonuse totals to 146,382,489 passengers. To that we add the consented use, which totals 47,135,041. The total deduction to be taken out of the whole of the Category II airport passenger throughput is 193,517,530.

2. Royalty Calculation

The base (total passenger throughput) is 706,097,588, from which we take away 193,517,530 passengers representing consented use and deductions proven for nonuse. The resulting royalty base is 512,580,058. We then apply the $0.02 per passenger royalty rate (512,580,058 x $0.02) to

[34] Plaintiff also argues, as to the automated return systems, that this is a new, and previously undisclosed, assertion of non-infringement which comes too late. We do not reach that procedural issue because we do not make use of it in our damages or infringement analysis.

come up with total unadjusted (for time) damages for this phase of the case of $10,251,601.16.

3. Delay Damages

All that remains is delay damages, which should be calculated in the same manner as they were for the Category X and I phase: annual compounding based on the 10-year Treasury rate with a "midyear convention." Tr. 1718-19 (McGavock); Tr. 1560-61 (Clemmons). Delay damages would run through the date of judgment.

CONCLUSION

As we explained above, we conclude that plaintiff has established comprehensive infringement of its patent at all Category II airports, save three (McGavock's first category of deductions) beginning in January 2008 and running through the expiration of the patent on November 21, 2023, with certain exceptions for periods at particular lanes where the method was not practiced. The passenger throughput for those periods at those lanes, where quantifiable with reasonable certainty, has been deducted from the royalty base. Plaintiff has established entitlement to a running royalty of $0.02 per passenger. Delay damages will be at the agreed upon rates and method of compounding. The precise quantum of damages, including interest, is left to the parties' calculation, which will include a true up of additional infringement at Category X and I airports through the patent's expiration date.

A number of pretrial motions are also pending. Three relate to the parties' disagreements regarding how to handle deposition testimony used at trial and the fourth concerns plaintiff's request for an adverse inference. We dealt with the latter above. As to the motions regarding the deposition designations, we find all of them moot.

Accordingly, the following is ordered:

1. All pending motions are denied as moot.

2. The parties are directed to confer regarding a true up of all infringing throughput at Category X, I, and II airports consistent with this opinion and the earlier infringement opinion. Then delay

damages must be applied to those sums consistent with the two damages opinions.

3. The parties are directed to file a join status report on or before January 21, 2025, indicating the proper amount of the final judgment.

s/Eric G. Bruggink
Eric G. Bruggink
Senior Judge

Code	Airport
ABE	Lehigh Valley International Airport, Allentown, Pennsylvania
ACY	Atlantic City International Airport
AGS	Augusta Regional Airport
AMA	Rick Husband Amarillo International Airport
ASE	Aspen/Pitkin County Airport, Aspen, Colorado
ATW	Appleton International Airport, Appleton, Wisconsin
AVL	Asheville Regional Airport
AVP	Wilkes-Barre/Scranton International Airport, Avoca, Pennsylvania
BGR	Bangor International Airport, Bangor, Maine
BIL	Billings Logan International Airport, Billings, Montana
BIS	Bismarck Municipal Airport
BLI	Bellingham International Airport, Bellingham, Washington
BTR	Baton Rouge Metropolitan Airport
BTV	Burlington International Airport, Burlington, Vermont
BZN	Bozeman Yellowstone International Airport
CAE	Columbia Metropolitan Airport, Columbia, South Carolina
CAK	Akron-Canton Airport
CHA	Chattanooga Metropolitan Airport
CHO	Charlottesville-Albemarle Airport, Charlottesville, Virginia
CID	The Eastern Iowa Airport, Cedar Rapids, Iowa
COS	Colorado Springs Airport
CRP	Corpus Christi International Airport
DAB	Daytona Beach International Airport
DAY	Dayton International Airport
DSM	Des Moines International Airport

ECP	Northwest Florida Beaches International Airpor
EUG	Eugene Airport, Eugene, Oregon
EYW	Key West International Airport
FAI	Fairbanks International Airport, Fairbanks, Alaska
FAR	Hector International Airport, Fargo, North Dakota
FAT	Fresno Yosemite International Airport
FNT	Bishop International Airport, Flint, Michigan
FSD	Sioux Falls Regional Airport
FWA	Fort Wayne International Airport
GPI	Glacier Park International Airport, Kalispell, Montana
GPT	Gulfport-Biloxi International Airport
GRB	Green Bay-Austin Straubel International Airport
GSN	Saipan International Airport, Saipan, Northern Mariana Islands
GSO	Piedmont Triad International Airport, Greensboro, North Carolina
GSP	Greenville-Spartanburg International Airport
HPN	Westchester County Airport, White Plains, New York
HRL	Valley International Airport, Harlingen, Texas
HSV	Huntsville International Airport
ICT	Wichita Dwight D. Eisenhower National Airport
ILM	Wilmington International Airport, Wilmington, North Carolina
ISP	Long Island MacArthur Airpor
ITO	Hilo International Airport, Hilo, Hawaii
IWA	Phoenix-Mesa Gateway Airport
JAC	Jackson Hole Airport

JAN	Jackson-Medgar Wiley Evers International Airport, Jackson, Mississippi
JNU	Juneau International Airport
LBB	Lubbock Preston Smith International Airpor
LEX	Blue Grass Airport, Lexington, Kentucky
LIT	Bill and Hillary Clinton National Airport, Little Rock, Arkansas
MAF	Midland International Air & Space Port, Midland, Texas
MDT	Harrisburg International Airport
MFE	McAllen International Airport, McAllen, Texas
MFR	Rogue Valley International-Medford Airport
MHT	Manchester-Boston Regional Airport
MLI	Quad City International Airport
MOB	Mobile Regional Airport
MSN	Dane County Regional Airport, Madison, Wisconsin
MSO	Missoula Montana Airport
PAE	Paine Field, Everett, Washington
PGD	Punta Gorda Airport
PIA	General Wayne A. Downing Peoria International Airport
PIE	Pittsburgh International Airport
PNS	Pensacola International Airport
PSC	Tri-Cities Airport, Pasco, Washington
PSP	Palm Springs International Airport
PWM	Portland International Jetport
RAP	Rapid City Regional Airport
RDM	Redmond Municipal Airport, Oregon
ROA	Roanoke-Blacksburg Regional Airport
ROC	Greater Rochester International Airport
SBA	Santa Barbara Municipal Airport
SBN	South Bend International Airport
SGF	Springfield-Branson National Airport

SHV	Shreveport Regional Airport
SRQ	Sarasota-Bradenton International Airport
STT	Cyril E. King Airport, St. Thomas
SYR	Syracuse Hancock International Airport
TLH	Tallahassee International Airport
TTN	Trenton-Mercer Airport
TYS	McGhee Tyson Airport
VPS	Destin–Fort Walton Beach Airport
XNA	Northwest Arkansas Regional Airport