

**In the United States Court of Federal Claims**

No. 11-201C

(Filed: September 19, 2018)<sup>1</sup>

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ROSS-HIME DESIGNS, INC.,  
  
Plaintiff,  
  
v.  
  
THE UNITED STATES,  
  
Defendant.  
  
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Patent Infringement; Motion  
to Dismiss; Statute of  
Limitations; Claim Accrual;  
Accrual Suspension; Tolling;  
35 U.S.C. § 286.

Vytas M. Rimas, Rimas Law Firm, PLLC, 5101 Thimsen Ave., Suite 204, Minnetonka, MN, 55345, for Plaintiff.

Chad A. Readler, Gary L. Hausken, and Conrad J. DeWitte, Jr., U.S. Department of Justice, Civil Division, Commercial Litigation Branch, P.O. Box 480, Ben Franklin Station, Washington, D.C. 20044, for Defendant. Kurt G. Hammerle, Office of the Chief Counsel, NASA Johnson Space Center, Of Counsel.

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**OPINION AND ORDER GRANTING IN PART  
DEFENDANT’S MOTION TO DISMISS**

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**WILLIAMS**, Senior Judge.

This patent infringement case comes before the Court on Defendant’s motion to dismiss some claims as time-barred. In this action, Plaintiff, Ross-Hime Designs, Inc. (“Ross-Hime”) asserts that the National Aeronautics and Space Administration (“NASA”) infringed two of Ross-Hime’s patents through NASA’s use and manufacture of robotic hand-like manipulators in two anthropomorphic robotics systems, designated Robonaut 1 and Robonaut 2. Ross-Hime filed suit on April 1, 2011, asserting that Robonaut 1 infringes claims 1, 3, 4, 5, 7, 8, 10, and 14 of the ’580

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<sup>1</sup> The Court issued this opinion under seal on August 24, 2018, and directed the parties to file proposed redactions by September 7, 2018. Neither party has proposed redactions. Accordingly, the Court publishes this opinion correcting errata.

patent and that Robonaut 2 infringes claims 1, 5, 14 and 15 of the '580 Patent and claims 11, 14, and 16 of the '962 patent. Defendant seeks dismissal of Ross-Hime's infringement claims with respect to two iterations of Robonaut 1—Robonaut 1A and Robonaut 1B.<sup>2</sup> Defendant contends that these claims are time-barred because Ross-Hime's cause of action accrued no later than June 16, 2003, and this suit was not filed until almost eight years later on April 1, 2011.

Because Ross-Hime submitted an administrative claim regarding Robonaut 1A on September 1, 2001, the statute of limitations was tolled for six years while that administrative claim was pending, and its infringement claim as to that device is timely. However, Ross-Hime's claim against Robonaut 1B accrued later—in 2002—was not the subject of an administrative claim, and is time-barred. As such, Ross-Hime's claim as to Robonaut 1B is dismissed as time-barred.

### **Findings of Fact**<sup>3</sup>

Ross-Hime is a Minnesota corporation specializing in the design of humanoid robotic systems, including robotic manipulators and is the assignee of United States Patents 5,967,580 (“the '580 patent”) and 6,658,962 (“the '962 patent”). The inventions of the '580 and '962 patents relate to anthropomorphic robotic manipulators in which the robot mimics the movements performed by a human operator. Only the '580 patent is asserted against Robonaut 1. The invention of the '580 patent more specifically “relates to controlled motion mechanical members used as a mechanical manipulator and, more particularly, to a motion controllable, anthropomorphic mechanical manipulator providing some of the capabilities of an upper human torso.” '580 Patent 1:8-12. Plaintiff asserts that the hands of Robonaut 1 infringe on independent Claims 1 and 5 of the '580 patent, and dependent Claims 3, 4, 7, 8, 10, 14, and 15, all of which depend on Claim 1. Compl. ¶¶ 5-11; Ross-Hime Designs, Inc. v. United States, 126 Fed. Cl. 299, 314 (2016).

The asserted claims of the '580 patent aim to robotically simulate a gripping mechanism, and describe various actuators using differential movement to achieve the dexterous motion of a thumb and forefinger and grasping motion of a human palm. Claim 1 of the '580 patent is illustrative:

1. An articulated manipulating system for mounting on a base in a robotic manipulator and capable of engaging selected objects, and said system comprising:

a support frame having a base support for mounting on said base with said base support having a first frame extension so as to extend therefrom in a first direction

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<sup>2</sup> Robonaut 1A's right hand was assembled, attached to a robotic frame, and tested in 1999, and its left hand was assembled, combined with the right hand on the robotic frame, and tested in 2000. J. Ex. 38, at 5. Robonaut 1B was built and tested in 2002. *Id.* NASA's first Robonaut was referred to as simply “Robonaut” until NASA built the second unit in 2002, and the units were then called Robonaut A and Robonaut B. After NASA began developing a second Robonaut series in 2006, the first two Robonaut models were renamed Robonaut 1A and Robonaut 1B.

<sup>3</sup> These findings of fact are based upon evidence adduced at a hearing on Defendant's motion to dismiss. “Tr.” refers to that evidentiary hearing, and “J. Ex.” refers to joint exhibits.

and a second frame extension rotatable connected to said base support and extending therefrom in a second direction at an angle to said first direction;

a first effector base rotatably connected to said first frame extension so as to be rotatable with respect thereto in plural different directions;

a second effector base rotatable connected to said second frame extension so as to be rotatable with respect thereto in plural different directions;

first pair of base linear actuators each having an end thereof rotatably connected to said first frame extension at corresponding extension connection locations thereon, and each having that opposite end thereof rotatably connected to said first effector base at corresponding effector connection locations thereon so that any substantial differentials in movement of these actuators cause corresponding substantial motions of said first effector base towards a corresponding one of said extension connection locations and so that substantial common movements of these actuators causes substantial motions of said first said effector toward or away from both of said extension connection locations; and

a second pair of base linear actuators each having an end thereof rotatable connected to said second frame extension at corresponding extension connection locations thereon, and each having that opposite end thereof rotatably connected to said second effector base at corresponding effector connections locations thereon.

'580 Patent 27:42-28:9.

The hand-like manipulator of Claim 1 is depicted in Figure 11 of the '580 patent:

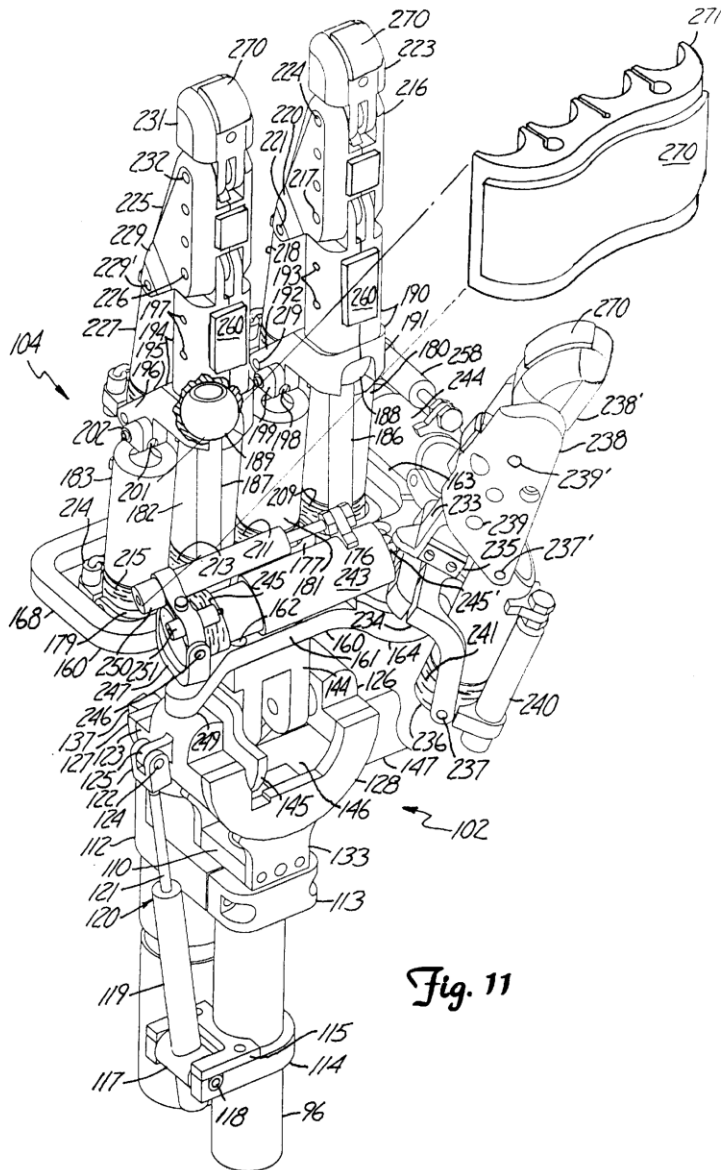


Fig. 11

'580 Patent Fig. 11.

The '580 Patent issued on October 19, 1999, named Ross-Hime Designs, Inc., as the assignee, and Mark Rosheim, Ross-Hime's founder, as the inventor. *Id.* at 1. Mr. Rosheim initially submitted the application for the '580 patent on November 25, 1997, and that application was a continuation of an abandoned application dated September 8, 1995, and a continuation-in-part of another abandoned application dated June 30, 1995. '580 Patent. In addition to the '580 patent and '962 patent, Mark Rosheim is the named inventor on numerous other patents in the field of robotic manipulators and has published several articles and books on the topic. Ross-Hime claims that the Robonaut 1 hands infringe on the '580 patent, in part, because the "differential drive of the thumb and dexterous finger" of the Robonaut 1 are effectuated using "actuators," as in the invention described in the '580 patent. *See, e.g., J. Ex. 7.*

## **Development of the Robonaut**

NASA developed the Robonaut hand to assist with extravehicular activity on the then-in-progress International Space Station. J. Ex. 25. Because many space station systems and tools were designed for human operators, it was essential that this robotic system have a high degree of anthropomorphic dexterity. Id. The Robonaut hand was one of several robotic hands that were being developed to reduce the number of instances where astronauts were forced to leave the space vehicle and expose themselves to the dangers of space. Id. In order to limit an astronaut's extravehicular time, the Robonaut hand needed to possess the dexterity equal to that of an astronaut wearing a pressurized spacesuit. J. Ex. 26. This would allow the robotic hand to work with human-rated tools and interface with systems on the space vehicle that were designed for human operation. J. Ex. 17.

Work on the Robonaut hand began in Fiscal Year 1997, at NASA Johnson Space Center in Houston, Texas, and was initially funded by NASA and later by the Defense Advanced Research Projects Agency. J. Ex. 38, at 4. In the fall of 1998, NASA assembled the first Robonaut hand for testing, and manufactured an arm to attach the hand to a torso. Id. at 5; Tr. 93 (Sept. 26, 2017).

On January 25, 1999, Dr. Myron Diftler, who was at the time an employee of Lockheed Martin and is currently employed by NASA, and Mr. Christopher Lovchik, who was at the time a NASA employee, filed for a patent on the technology utilized in the Robonaut hand listing NASA as assignee. '644 Patent. The United States Patent and Trademark Office issued U.S. Patent No. 6,244,644 ("the '644 patent") entitled "Compact Dexterous Robotic Hand," on June 12, 2001, listing NASA as assignee and naming Dr. Diftler and Mr. Lovchik as the inventors. Id. The invention of the '644 patent "relates to a compact, rugged, dexterous robotic hand that closely resembles the function of a human hand . . . . Force is mechanically transmitted from drive components in a forearm portion through the wrist section to operate the plurality of fingers and thumbs." Id. 1:10-17. The '644 specification goes on to describe the operation of the hand, and the patent includes the following model of the hand:

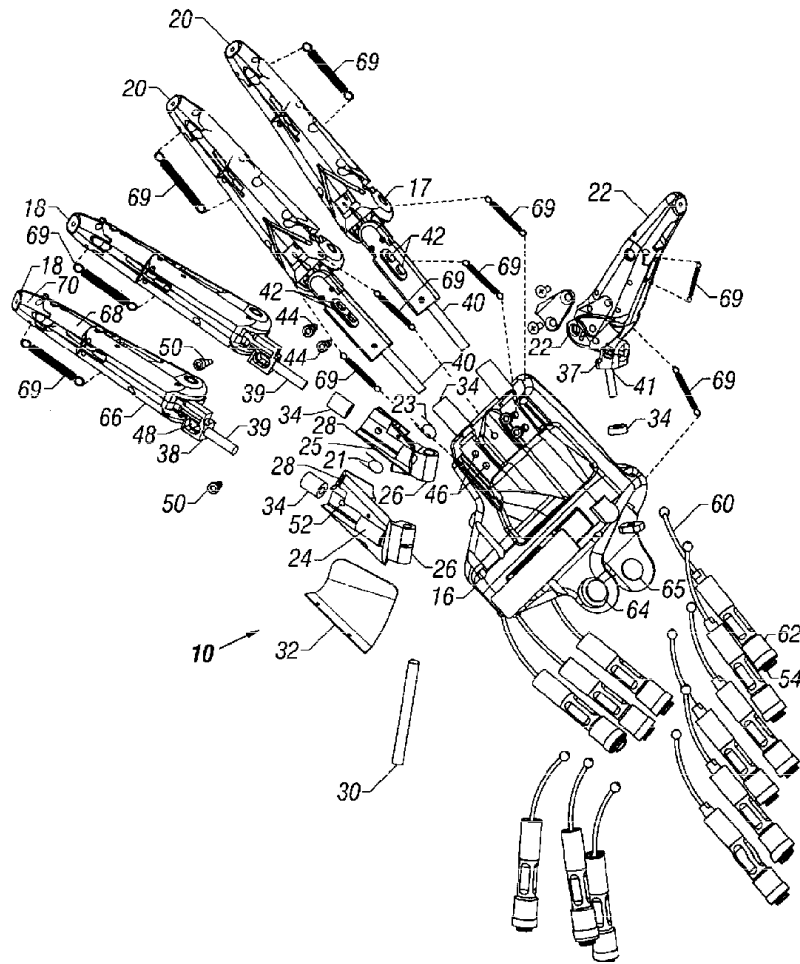


FIG. 2

Id. Fig. 2. “Fig. 2 [above] is an exploded view of the robotic hand including the flexible fingers, palm member, palm housing, and lead screw assemblies.” Id. 7:52-54.

The Robonaut hand was publicly presented at the 1999 International Conference on Robotics and Automation of the Institute of Electrical and Electronics Engineers. Tr. 84-85 (Sept. 26, 2017). At that conference, which took place in May in Detroit, Michigan, Dr. Diftler and Mr. Lovchik presented the assembled hand with an accompanying paper entitled The Robonaut Hand: A Dexterous Robot Hand for Space, subsequently published in the proceedings of the conference. J. Ex. 25; Tr. 84-85, 272 (Sept. 26, 2017). The paper explained the purpose, design philosophy and the resulting design, challenges faced, and the next steps to be taken, and included a photograph of the hand and a figure breaking out the components:



Figure 1: Robonaut Hand

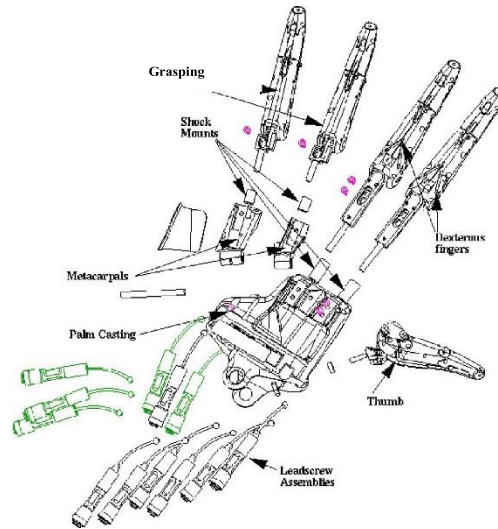
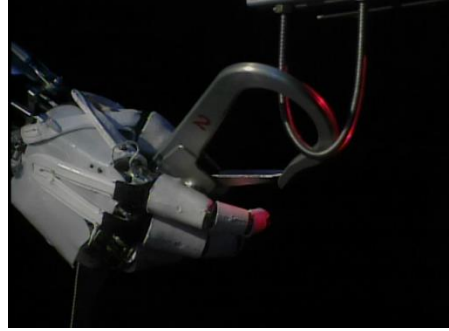
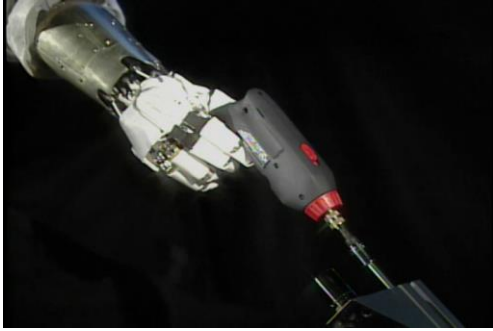


Figure 2: Hand components

J. Ex. 25, at 1-2.

The paper also featured exploded views of the models and detailed descriptions of the finger drive train, the dexterous fingers, grasping fingers, thumb, palm, and wrist/forearm. Id. at 2-5. The paper described the hand as “consist[ing] of a forearm which houses the motors and drive electronics, a two degree of freedom wrist, and a five finger, twelve degree of freedom hand . . . . The hand itself is broken down into two sections [Figure 2, above]: a dexterous work set which is used for manipulation, and a grasping set which allows the hand to maintain a stable grasp while manipulating or actuating a given object.” Id. at 2. The figures in the paper displaying the finger leadscrew assembly, dexterous finger, decoupling links, grasping fingers, forearm base cam, forearm assembly, and wrist mechanism are identical to drawings in the ’644 Patent. Compare ’644 Patent Figs. 2-14 with J. Ex. 25, at 2-5.

In the fall of 1999, after Dr. Diftler and Mr. Lovchik had presented the paper at the IEEE conference, NASA integrated the hand with a partial torso and head mechanism. Tr. 93 (Sept. 26, 2017). The assembled unit was videotaped as part of an educational NASA video entitled “Robonaut,” released on December 29, 1999. J. Ex. 11. In that video, a voice-over narrates as the hand demonstrates several capabilities, including using tools intended for human operation and dexterously manipulating objects. Id. The following stills taken from the video show the Robonaut hand operating a power drill similar to a space torque wrench used to loosen or tighten bolts on a spacecraft, and manipulating a tether of the sort used by astronauts to anchor themselves to a spacecraft:



Id.

The video concluded with contact information:



J. Ex. 11.

The content of the video was taken from a resource reel dated December 1, 1999. See Green Decl. ¶¶ 6-7 (stating that her search of NASA’s video archive “revealed a resource reel from which content was taken to be used” in the December 29, 1999 video, and “the production date of the resource reel . . . is December 1, 1999”).<sup>4</sup>

NASA added a second arm to Robonaut in October 2000, and a second hand to Robonaut between October and December 2000. Tr. 93-95 (Sept. 26, 2017). NASA published a video entitled “Robonaut: The Next Step in Robotics” on March 13, 2001, which showed both hands working together, performing tasks such as stripping wire, opening packages, hooking and unhooking tethers, tying a knot, and digging through simulated Martian soil. Id. at 40-45; J. Ex. 12; Green Decl. ¶ 5. The following still taken from the March 2001 video shows the Robonaut “working with two tools, a simulated space screw driver and a hand drill”:

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<sup>4</sup> Ms. Green is a NASA employee “responsible for overseeing preservation projects, providing oversight for cataloging support, and ensuring the successful maintenance of [Johnson Space] Center imagery repositories.” Green Decl. ¶ 1. She “authorized and reviewed a search” of NASA’s video archives regarding the subject Robonaut videos, and she “personally reviewed” NASA’s records of the video and resource reel. Id. at ¶¶ 3, 9.





Tr. 41 (Sept. 26, 2017); J. Ex. 12. The video ended with the same slide as the previous video advising the viewer on how to obtain additional information.

NASA began work on a second generation Robonaut unit in the fall of 2002, which was given the moniker Robonaut B; the original unit was then renamed Robonaut A. J. Ex. 38, at 5. Later, NASA would begin development of an operational Robonaut unit to be launched into orbit for work aboard the International Space Station. That unit was designated as Robonaut 2, and Robonauts A and B were renamed Robonaut 1A and 1B. Tr. 154-55 (Sept. 26, 2017).<sup>5</sup>

During the week of June 16, 2003, NASA conducted Human-Robot Spacewalk Squad Tests, to evaluate Robonauts 1A and 1B in the role of assisting a human astronaut. J. Ex. 2. During the experiment both Robonaut units, under the control of human teleoperators, helped NASA astronaut Colonel Nancy Currie assemble a simulated truss structure. *Id.* In the video taken of those tests, Robonaut 1A and Robonaut 1B can each be seen using both hands to assist in the construction of the truss. *Id.* One of the gripping fingers on Robonaut 1B can be seen malfunctioning and locked in an open position, but otherwise all four hands adequately perform the required tasks, including picking up truss components and handing them to Astronaut Currie and manipulating flexible cables. *Id.* In the 2003 video NASA had added tactile gloves over the Robonaut hands in order to improve the grip and give enhanced feedback to the teleoperators. Tr. 35 (Sept. 26, 2017). The following stills taken from the June 2003 video show Colonel Currie working with Robonaut 1A and Robonaut 1B to raise the truss structure and the Robonauts “working to take a cable with a connector and hand it to [Colonel] Currie so she can connect it to the truss, simulating assembly operations in space”:

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<sup>5</sup> In addition to Robonaut 1A and 1B, Defendant constructed two test fingers referred to as the “Robonaut 1C finger[s].” Tr. 154 (Sept. 26, 2017). These fingers were used for vacuum chamber testing designed to mimic the conditions of space. This testing was performed at the Johnson Space Center from September 26, 2006, to September 30, 2006. Def.’s Ex. V. The 1C fingers were not part of a complete hand or wrist assembly, and no complete Robonaut 1C device was ever constructed. Tr. 71-72 (Sept. 26, 2017).



J. Ex. 2; Tr. 24, 28 (Sept. 26, 2017).

### **Technical Articles and Publications**

In addition to the 1999 paper presenting the Robonaut hand, the Robonaut was the subject of several technical publications throughout its development. A July 9, 2000 article published in The Daily News of Galveston County, Texas, contained close-up pictures of the Robonaut hand and discussed the grip strength, degrees of dexterity, and functions of the hand. J. Ex. 18. Articles detailing the progress NASA had made on the Robonaut were featured in Volume 14 of Autonomous Robots, published in 2003, in the 2005 and 2007 Proceedings of the IEEE International Conference on Robotics and Automation, and in the Proceedings of the 2004 Conference on Human-Computer Interaction. J. Exs. 15-17, 26.

### **Correspondence Between Ross-Hime and NASA**

From June 24, 2000, to October 1, 2001, NASA and various representatives of Ross-Hime exchanged a series of six letters. In a June 24, 2000 letter to Chris Culbert<sup>6</sup> at NASA Johnson Space Center, Mr. Rosheim wrote:

Thank you for speaking with me regarding the fate of the Robotic Surrogate and other matters.

Regarding the Robonaut Hand I believe that NASA is infringing on one of our basic patents (see enclosure). This was made clear to Edith Taylor, Charles Price and Chriss Lovchik when we delivered the Surrogate a few years ago. It is my understanding that Chriss based his hand on drawings delivered under our NASA contract for a direct drive hand.<sup>7</sup> A [sic] approach that still offers higher forces, greater simplicity and lighter weight.

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<sup>6</sup> The addressee's name is misspelled as "Chriss Culvert," but Mr. Rosheim intended the letter to be sent to Chris Culbert. J. Ex. 4; Tr. 348 (Sept. 27, 2017). Mr. Rosheim recalled that Mr. Culbert was an engineer in NASA's robotics group. Tr. 349 (Sept. 27, 2017).

<sup>7</sup> Ross-Hime began developing robotic hands under a NASA contract in the late 1980s, and produced a second generation of its robotic hand design under a subcontract with Lockheed

I would appreciate a response regarding the above at your earliest convenience. We are very interested in granting NASA a license to continue this work and please don't misconstrue this letter in any other light.

J. Ex. 4. NASA did not respond to this letter. While the parties could not locate the referenced enclosed patent, Mr. Rosheim testified that the reference was likely to the '580 patent. Tr. 349, 386-88 (Sept. 27, 2018).

David Jasper, Ross-Hime's CEO, sent a letter on July 22, 2001, to Walter Guy, "the manager of an umbrella group" at the Johnson Space Center that "encompassed all robotics," according to Mr. Rosheim's recollection. J. Ex. 5; Tr. 359 (Sept. 27, 2017). In that letter, Mr. Jasper stated Ross-Hime's belief that the '644 Patent recently issued to NASA "reads on patents held by Ross-Hime Designs" and that due to that perceived "overlap of our existing patents" Ross-Hime was "seeking restitution including license fees and possible damages." J. Ex. 5. Mr. Jasper testified that Ross-Hime's purpose in sending this letter was to "negotiate a license." Tr. 315 (Sept. 27, 2017). He continued: "we felt they were using our technology and they should be paying for it." Id.

Hardie Barr, an attorney in NASA's Office of Patent Counsel at Johnson Space Center, responded in the following letter on August 16, 2001, seeking clarification about Ross-Hime's concerns:

We were somewhat surprised by the overall tone of subject letter which suggests a feeling by Ross-Hime-Designs, Inc. that NASA has somehow acted improperly to the detriment of Ross-Hime-Designs, Inc. Let me assure you, Mr. Jasper, that we have no intention of depriving Ross-Hime Designs, Inc. of any rights to which it is entitled. Perhaps you could help us understand your concern by expressing more clearly what is the nature of any perceived impropriety.

As noted in subject letter, a patent (specifically, U.S. Patent No. 6,244,644, Compact Dexterous Robotic Hand) issued to NASA (on June 12, 2001) naming Christopher Lovchik and Myron Diftler as inventors. Subject letter suggests, generally, that there are similarities between the screw drive of the fingers and thumb of that patent and patents held by Ross-Hime Designs, but the nature of any perceived similarities is not given.

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Subject letter concludes with references to several legal concepts, including "restitution," "license fees," and "damages," but we are at a loss to understand why Ross-Hime Designs, Inc. feels that these concepts are pertinent.

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Engineering Sciences Company. Tr. 333-34 (Sept. 27, 2017). Ross-Hime's subcontract was completed on October 1, 1994. Id.

Mr. Jasper, we earnestly solicit your support in helping us resolve the perceived conflict that your letter alludes to. Please provide us with more specific information regarding the reason for your concern.

J. Ex. 6.

The parties agree that Ross-Hime responded to this letter with a letter dated September 1, 2001, but neither Ross-Hime nor NASA has been able to locate a copy of that letter. Tr. 319-22, 336-37, 416 (Sept. 27, 2017). NASA responded to this missing letter on September 13, 2001, “Re: Letter: David P. Jasper, Ross-Hime Designs, Inc. to Hardie Barr, NASA Johnson Space Center, dated September 1, 2001,” stating:

I wish to again express a desire on the Part of NASA to resolve any perception that NASA has, somehow, deprived Ross-Hime Designs, Inc. of any rights.

In my response to your earlier letter (dated July 22, 2001), I requested (by letter dated August 16, 2001) more specific information regarding why you felt that NASA’s hand violated any of Ross-Hime Design’s patent rights. Subject letter suggests that without “direct knowledge of [NASA’s] implementation of a hand, [you] cannot be very specific.” In Subject letter you also suggested that we should supply you with drawings and photographs of our “implementation of a hand” and thus enable you to “elucidate” all of your claims.

\* \* \*

Subject letter refers to your previous letter that mentioned a “differential drive of the thumb and dexterous finger [that] is a very basic concept protected by [your] patent #5967580 (specifically claim #1).” Rather than discuss general similarities, I would like to point out some specific differences between Claim 1 of your Patent No. 5,967,580 (‘580) and our implementation of the hand as described in our ‘644 patent.

\* \* \*

While both patents involve “differential drives” as you suggest, they are vastly dissimilar in the way they operate. The similarities: (a) Claim 1 of your ‘580 patent claims “differentials in movement” of actuators that cause a desired movement of the finger and (b) the actuators used in the NASA hand move cables in a “differential manner” thus effecting a desired movement of the finger. The differences: (a) As pointed out above; the ‘580 patent uses linear actuators, the NASA hand (as described in the ‘644 patent) uses rotary actuators;<sup>[8]</sup> (b) in the ‘580 patent, the linear actuators are connected directly to the finger segment, whereas in the NASA hand as described in the ‘644 patent, there are three intermediate

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<sup>8</sup> Defendant’s expert witness at the claim construction hearing, Dr. J. Kenneth Salisbury, Jr., testified that the difference between a rotary actuator and a linear actuator is that a rotary actuator “causes rotation, and [a linear actuator] causes translation, straight line translation.” Tr. 342 (May 28, 2015). Plaintiff’s expert, Mr. Theodore F. Neils, testified that a rotational actuator “only goes in a rotational mode.” Id. at 399.

elements between a rotary actuator and the finger segment. In summary, the differential drive aspects of the '580 patent and the implementation of the NASA hand as described in the '644 patent are different in kind and in manner of operation.

Accordingly, I cannot agree that the Ross-Hime Designs, Inc. patent (U.S. Patent No. 5,967,580 reads on any implementation of the NASA hand as described in U.S. Patent No. 6,244,644.

J. Ex. 7.

In an October 1, 2001 letter to Hardie Barr, Ross-Hime's David Jasper responded to NASA's September 13, 2001 letter, and stated that "the purpose of our communication [was] to seek proper licensing agreements for those implementations that read on our issued patents." J. Ex. 8. Mr. Jasper continued that "[w]e assert that the '644 patent provides differential movement of the dextrous fingers and thumb in the same manner as the finger-like segments in our '580 patent. The distinctions in actuator methods that you emphasize are not the only point of overlap." Id.

In this October 1, 2001 letter Mr. Jasper further addressed NASA's "interpretations of actuator differences," stating:

1. A linear actuator is nothing more than a powered device having an end output which is a linear motion. Linear actuators are typically a package which consists of a electric motor which can rotate in either direction that has been connected to a mechanical system that converts the motion to back and forth or in/out action. Some form of screw drive is the typical mechanical system but the use of cams and levers also produces linear from rotary motion. NASA's dexterous hand is no different in that regard. In Col. 10 of '644 patent in the paragraph beginning at line 28 where it clearly states that a rotary actuator [91] is connected to a lead screw assembly to translate rotational movement into linear movement to operate the fingers. In other words, the packaging of the screw drive does not change its essential function, there is no difference in kind.
2. The actuators set out in claim 1 of the '580 patent describe those actuators as being connected to a structure consisting of bases, frames, and extensions, none of which are limited to simulating a palm portion of a hand. Any other structure supporting the manipulating system in that claim serves as a base including palm-like portions, wrist-like portions, arm-like portions, or other structures supporting the manipulating system. In patent '644 your location of the actuators on/in the forearm is not different from our claim 1.
3. The actuators set out in claim 1 of the '580 patent are stated to be rotatably connected to what you term the first finger segments, but there is no requirement in our claims as to direct or indirect attachment. It is obvious in both the '580 and '644 patents that the thumb and finger segments can rotate with respect to the actuators. Such a connection is necessarily a rotatable connection of the actuators and the dexterous finger and thumb segments for

purposes of claim 1. A flexible shaft is not different in kind and would be included in our more broadly stated claim 1.

In other words, the '644 patent provides differential movement of the dexterous fingers and thumb in the same manner as the finger-like segments in the '580 patent by mounting those dexterous fingers on a two-degree of freedom joint just as the finger-like segments in the '580 patent. Although the '644 patent device moves the actuators further from those dexterous fingers and thumb, this is done by merely using a longer drive to rotatably connect them to the effective linear actuators.

Id. (emphasis in original).

Mr. Jasper concluded the letter by stating that “[w]hile this discussion is stimulating it is not moving us forward toward a license agreement.” Id. NASA did not respond to Ross-Hime’s October 1, 2001 letter, and there is no further correspondence in the record.

### **Procedural History**

Ross-Hime filed suit on April 1, 2011, asserting that Robonaut 1 infringes claims 1, 3, 4, 5, 7, 8, 10, and 14 of the '580 patent and that Robonaut 2 infringes claims 1, 5, 14 and 15 of the '580 Patent and claims 11, 14, and 16 of the '962 patent. The Court held a claim construction hearing and construed three terms common to the '580 and '962 patents and one term that appears only in the '962 patent. Ross-Hime Designs, Inc., 126 Fed. Cl. at 327. Defendant then moved to dismiss the infringement claims directed against Robonaut 1 under Rule 12(b)(1)—namely, that Robonaut 1 infringes on independent claims 1 and 5 and dependent claims 3, 4, 8, and 14 (dependent on claim 1), 7 (dependent on claim 3), and 10 (dependent on claim 4) of the '580 patent. The Court conducted an evidentiary hearing in St. Paul, Minnesota, on September 26-27, 2017, on Defendant’s motion to dismiss.<sup>9</sup>

### **Discussion**

Defendant asserts that Plaintiff’s claims with respect to Robonaut 1 are time-barred under this Court’s six-year statute of limitations, 28 U.S.C. § 2501. Plaintiff counters that its claims are timely because Robonaut 1 was not available for use until the six-year period before Plaintiff filed suit. Plaintiff further argues that the statute of limitations was suspended under the accrual suspension doctrine or tolled under 35 U.S.C. § 286.

### **Dismissal Under Rule 12(b)(1)**

The Government waived its sovereign immunity and consented to be sued for patent infringement in this Court under 28 U.S.C. § 1498(a), but that waiver is limited to claims of infringement that are brought within the six-year jurisdictional time limit of § 2501. MacLean v. United States, 454 F.3d 1334, 1336 (Fed. Cir. 2006) (holding that the jurisdictional limits of §

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<sup>9</sup> Because Plaintiff elected not to purchase a transcript of the evidentiary hearing, the parties jointly requested that the post-hearing briefs be submitted 45 days after the transcript became publically available. The Court granted the parties’ request and ordered that post-hearing briefs would be due on March 1, 2018. The parties subsequently moved for several extensions to complete post-hearing briefing, until May 18, 2018.

2501 are a condition on the Government's waiver of sovereign immunity); Unitrac, LLC v. United States, 113 Fed. Cl. 156, 160 (2013). Such waivers of sovereign immunity must be construed narrowly and in favor of the Government. Lane v. Pena, 518 U.S. 187, 192 (1996). Subject-matter jurisdiction is a threshold requirement and cannot be waived by the parties. Arbaugh v. Y&H Corp., 546 U.S. 500, 514 (2006); Starobin v. United States, 662 F.2d 747, 750 (Ct. Cl. 1981) (per curiam). The Court lacks subject-matter jurisdiction over claims that are barred by § 2501, and such claims must be dismissed. John R. Sand & Gravel Co. v. United States, 552 U.S. 130, 133-34 (2008).

Once subject-matter jurisdiction has been challenged, the plaintiff bears the burden of establishing the Court's jurisdiction by a preponderance of the evidence. Reynolds v. Army & Air Force Exch. Serv., 846 F.2d 746, 748 (Fed. Cir. 1988). To carry that burden, the plaintiff must present "competent proof" and affirmatively show that the Court has jurisdiction. McNutt v. Gen. Motors Acceptance Corp., 298 U.S. 178, 189 (1936). The Court may consider this evidence and resolve factual disputes when evaluating whether it has jurisdiction over the challenged claims. Unitrac, 113 Fed. Cl. at 159; see Moyer v. United States, 190 F.3d 1314, 1318 (Fed. Cir. 1999) (finding that fact-finding is proper when considering a motion to dismiss where the jurisdictional facts are challenged.); Schultz v. United States, 92 Fed. Cl. 213, 218 (2010).

### **Accrual of Causes of Action for Patent Infringement**

Under the statute of limitations in 28 U.S.C. § 2501, a patent infringement claim against the Government must be brought within six years after that claim "first accrues." A patent owner's cause of action for infringement under 28 U.S.C. § 1498(a) accrues when the accused device is "first used or manufactured by the Government." Decca Ltd. v. United States, 640 F.2d 1156, 1166 (Ct. Cl. 1980). An accused device is deemed to have been "manufactured" when it is "made to include each limitation in the thing invented and is therefore suitable for use." FastShip, LLC v. United States, 892 F.3d 1298, 1306 (Fed. Cir. 2018). "Generally, infringement can occur only when the claimed combination has been assembled and is used or is available for use." Lemelson v. United States, 752 F.2d 1538, 1548 (Fed. Cir. 1985). "A device may be 'used' in many different ways, and all uses that rely on the teachings of a patent constitute infringement." Hughes Aircraft Co. v. United States, 29 Fed. Cl. 197, 226 (1993). "[N]either complete assembly nor complete testing" is necessary in order for a device to be "available for use." Id. at 218 (citing Paper Converting Mach. Co. v. Magna-Graphics Corp., 745 F.2d 11, 19-20 (Fed. Cir. 1984)).

For the purposes of 28 U.S.C. § 1498(a) the Government effects a one-time taking of a license to a specific device the instant that it is first available for use. Starobin, 662 F.2d at 749; see also Decca Ltd. v. United States, 544 F.2d 1070, 1082 (Ct. Cl. 1976) (cause of action "arises when the accused equipment is first available for use"). Alleged ongoing infringement does not extend or restart the limitations period. Rather, once the device is available for use, the license is taken, the patent owner's cause of action accrues, and the patent owner has six years to bring its case. Starobin, 662 F.2d at 749; Unitrac, 113 Fed Cl. at 160-61.

The first hand of what was later referred to as Robonaut 1A was assembled and presented to the public at the May 1999 IEEE International Conference on Robotics and Automation. In an accompanying paper, Dr. Diftler and Christopher Lovchik explained the mechanisms of the robotic hand and included exploded views of the various components and described "[s]everal novel mechanisms . . . that allow the Robonaut hand to achieve capabilities approaching that of an

astronaut wearing a pressurized space suited glove.”<sup>10</sup> J. Ex. 25, at 6. For example, the paper described the hand as “[having] a total of fourteen degrees of freedom. It consists of a forearm which houses the motors and drive electronics, a two degree of freedom wrist, and a five finger, twelve degree of freedom hand.” *Id.* at 2. The paper elaborated that “the motors are mounted outside the hand, and mechanical power is transmitted through a flexible drive train” and that “[t]o avoid the problems associated with using tendons, the hand uses flex shafts to transmit power from the motors in the forearm to the fingers. The rotary motion of the flex shafts is converted to linear motion in the hand using small modular leadscrew assemblies.” *Id.*

The ’580 patent issued on October 19, 1999. Any claim for infringement of the ’580 patent could accrue only after that date. *Starobin*, 662 F.2d at 750 (when a patent is issued after an item has been procured by the Government, the claim for infringement accrues at the time of “the first use of the item subsequent to the issuance of the patent”); *see* 28 U.S.C. § 1498(a) (2012) (“Whenever an invention described in and covered by a [U.S.] patent . . . is used or manufactured by or for the United States . . .”) (emphasis added). While the extent of the functionality of the hand at the time of the May 1999 conference is uncertain, it is clear that the hand was functional when it was videotaped performing several core functions in an educational video NASA released on December 29, 1999. J. Ex. 11. This video, and the 2001, 2003, and 2006 videos that also show the Robonaut hand, were released by NASA to “let people know what [NASA was] working on.” Tr. 39 (Sept. 26, 2017). In the December 1999 video, entitled “Robonaut,” the hand can be seen turning the page of a book, opening and closing its dexterous fingers and gripping fingers independently, manipulating a nut and bolt combination and a screwdriver, gripping and lifting a 15-pound dumbbell, operating a standard household power drill, clipping a tether to an anchor using a carabiner, removing and replacing Velcro strips, using tweezers to pick up small objects, and being teleoperated by a human operator. J. Ex. 11.

The asserted claims of the ’580 patent describe the mechanics for “[a]n articulated manipulating system for mounting on a base in a robotic manipulator and capable of engaging selected objects,” and aim to robotically simulate a gripping mechanism. ’580 Patent 27:42-44. In the December 1999 video, the first Robonaut 1A hand is seen performing a core function as it relates to the asserted claims of the ’580 patent—anthropomorphically manipulating objects. J. Ex. 11. Because the first Robonaut 1A hand was available to the Government for its use no later than the time NASA filmed the December 29, 1999 video on December 1, 1999, Ross-Hime’s claim that the first Robonaut 1A hand infringed the ’580 patent accrued no later than December 1, 1999.

NASA built a second Robonaut 1A hand in 2000. J. Ex. 38, at 5; Tr. 93-95 (Sept. 26, 2017). The record does not reflect the precise dates NASA built and assembled the second Robonaut 1A hand. According to a tutorial NASA created in 2014, for the claim construction hearing in this case—which was admitted into evidence without objection—in “Fall 2000,” NASA added to Robonaut 1A the “right wrist,” “left arm,” “left hand,” “waist and torso,” “left limb

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<sup>10</sup> Dr. Myron Diftler is a NASA employee and one of the two named inventors, along with Christopher Lovchik, on the ’640 Patent. J. Ex. 24. He testified on NASA’s behalf at the evidentiary hearing. Dr. Diftler has a doctorate in mechanical engineering from Rice University, a master’s degree in electrical engineering from Yale University, and a bachelor’s degree in mechanical and aerospace engineering from Princeton University. Tr. 9 (Sept. 26, 2017).



control,” “voice interface,” and “tested force feedback.” J. Ex. 38, at 7. Dr. Diftler testified that based on a picture in the tutorial dated October 10, 2000, Robonaut 1A had two arms by that date, and based on another photo labeled “Fall 2000,” that it had a second hand later in 2000, “as in November or December . . . or maybe even later in October.” Tr. 94-95 (Sept. 26, 2017). NASA did not order any additional parts for Robonaut 1A after December 2000. Id. at 158.

NASA later manufactured an additional Robonaut 1 device, Robonaut 1B. As with the second Robonaut 1A hand, the record does not clearly reflect Robonaut 1B’s stages of development. NASA’s 2014 claim construction tutorial provides a “Robonaut development history” that lists a date of “Fall 2002” for “Unit B,” and includes photos of Robonaut 1B dated “October 2002.” J. Ex. 38, at 5, 10. Dr. Diftler testified that Robonaut 1B was fully operational no later than October 2002, when Dr. Diftler himself displayed the Robonaut 1B “performing simple motions” at the 2002 World Space Conference in Houston, Texas. Tr. 95-96 (Sept. 26, 2017) (Dr. Diftler testifying he is “very confident” of October 2002 date); see J. Ex. 38, at 10 (photo of completed Robonaut 1B dated October 2002). Dr. Diftler also testified that NASA did not order any additional parts for Robonaut 1B after December 2002, although it may have ordered spare parts in 2003. Tr. 158-60 (Sept. 26, 2017).

NASA’s manufacture of the second Robonaut 1A hand and Robonaut 1B gave rise to new causes of action. Starobin, 662 F.2d at 749 (“[F]or each particular device only one right to recovery can arise, and that right must occur upon the first manufacture or use by or for the government of that specific device.”). The second Robonaut 1A hand was available for the Government’s use in “Fall 2000,” between October 10, 2000, and December 2000. Robonaut 1B was available for the Government’s use in “Fall 2002,” between September and October 2002. Accordingly, Ross-Hime’s causes of action for infringement by the second Robonaut 1A hand and Robonaut 1B accrued at latest in December 2000, and October 2002, respectively.<sup>11</sup>

### **Accrual Suspension**

Although NASA completed the first Robonaut 1A hand by December 1999, the second Robonaut 1A hand by December 2000, and Robonaut 1B by October 2002, Ross-Hime argues that NASA’s “lawful concealment” of the Robonaut technology should trigger the accrual suspension doctrine. Ross-Hime does not articulate when it believes the limitations period began to be

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<sup>11</sup> Relying on the fact that NASA mounted the completed Robonaut 1 hands and torso on various lower bodies after 2002, Ross-Hime asserts that its claims regarding Robonaut 1 did not accrue until 2006, because Robonaut 1 was in development until then. Pl.’s Post-Hearing Br. 7-9. The critical question is whether subsequent development of the device created substantial differences with respect to those aspects of the device that allegedly infringe on the patent. Unitrac, LLC v. United States, 113 Fed. Cl. 156, 162 (2013). The asserted claims of the ’580 patent describe the mechanics of a robotic hand, and in particular, the differential movement of the dexterous fingers and thumb. ’580 Patent 27:42-28:9. NASA’s mounting of the completed upper body and hands on different robotic lower bodies had no impact on the ability of the device to interact with and manipulate objects as described by the ’580 patent. Tr. 242-43, 284-85 (Sept. 26, 2017). As such, the fact that NASA mounted the completed Robonaut 1 hands on different robotic lower bodies does not affect the accrual of Ross-Hime’s claims with respect to Robonaut 1.

suspended or was reinstated, although it suggests that the limitations period was suspended at least until this case was filed in April 2011.

“[A]ccrual of a claim against the United States is suspended, for purposes of 28 U.S.C. § 2501, until the claimant knew or should have known that the claim existed.” Martinez v. United States, 333 F.3d 1295, 1319 (Fed. Cir. 2003) (en banc). To invoke this rule, a plaintiff “must either show that defendant has concealed its acts with the result that plaintiff was unaware of their existence or it must show that its injury was inherently unknowable at the accrual date.” Id. (internal citation and quotation marks omitted); see also Ingrum v. United States, 81 Fed. Cl. 661, 667 (2008), aff’d 560 F.3d 1311 (Fed. Cir. 2009) (citing Japanese War Notes Claimants Ass’n of Phil., Inc. v. United States, 373 F.2d 356, 358-59 (Ct. Cl. 1967)). “The accrual suspension rule is strictly and narrowly applied.” Ingrum, 560 F.3d at 1315 (internal citations and quotation marks omitted).

Ross-Hime does not allege that the infringement was inherently unknowable. Rather, Ross-Hime argues that NASA “kept the development of Robonaut 1 secret,” “restricted any public disclosures of Robonaut 1,” and “has continued to restrict” information regarding the Robonaut 1 technology “throughout this litigation.” Pl.’s Post-Hearing Br. 16-18. The record provides no support for Ross-Hime’s contention. The first Robonaut 1A hand was featured in a public educational video in December 1999, the complete Robonaut 1A was featured in a video in March 2001, and Robonaut 1A and Robonaut 1B were shown working side-by-side in a video in June 2003. All three videos specifically listed a NASA contact for additional information. J. Exs. 2, 11, 12; see Tr. 34, 39, 46 (Sept. 26, 2017) (Dr. Diftler explaining that videos of Robonaut were prepared in 1999, 2001, and 2003 for public affairs purposes “to let people know what we were working on” and that the videos were publicly released). NASA’s Robonaut hands were discussed in scholarly and news articles and technical papers released in July 2000, 2003, April 2004, April 2005, and April 2007. J. Exs. 15-18, 25-26.

Additionally, NASA filed its ’644 patent application on January 25, 1999, and the patent issued on June 12, 2001. J. Ex. 24. The ’644 patent further disclosed the technology used in the Robonaut 1, as evidenced by the identical drawings in the ’644 patent and Dr. Diftler’s 1999 technical paper regarding the Robonaut. Compare ’644 Patent Figs. 2-14 with J. Ex. 25, at 2-5; see also J. Ex. 7.

To invoke the accrual suspension rule, Ross-Hime must demonstrate “that defendant has concealed its acts with the result that plaintiff was unaware of their existence . . . .” Martinez, 333 F.3d at 1319 (internal citation and quotation marks omitted). Not only has Ross-Hime failed to demonstrate that NASA concealed the Robonaut 1 technology, but Ross-Hime’s own writings establish that Ross-Hime was aware that Robonaut 1 allegedly infringed the ’580 patent as early as June 24, 2000, when Mr. Rosheim first informed NASA by letter that he believed “the Robonaut Hand” was “infringing on one of [Ross-Hime’s] basic patents.” J. Ex. 4. Because NASA did not conceal the Robonaut, the limitations period was not suspended.

### **Administrative Tolling Under 35 U.S.C. § 286**

The six-year statute of limitations is subject to an administrative tolling period of up to six additional years under 35 U.S.C. § 286. This statute provides:

Except as otherwise provided by law, no recovery shall be had for any infringement committed more than six years prior to the filing of the complaint or counterclaim for infringement in the action.

In the case of claims against the United States Government for use of a patented invention, the period before bringing suit, up to six years, between the date of receipt of a written claim for compensation by the department or agency of the Government having authority to settle such claim, and the date of mailing by the Government of notice to the claimant that his claim has been denied shall not be counted as part of the [six-year] period referred to in the preceding paragraph.

35 U.S.C. § 286 (2012).

This provision is intended to allow the Government “time to carefully consider potential claims, and possibly correct its mistakes, before having to proceed with costly litigation.” Dow Chem. Co. v. United States, 32 Fed. Cl. 11, 20 (1994), aff’d in part and rev’d in part on other grounds, 226 F.3d 1334 (Fed. Cir. 2000); Custer v. United States, 622 F.2d 554, 558 (Ct. Cl. 1980); Fairchild Engine & Airplane Corp. v. United States, 285 F.2d 131, 133 (Ct. Cl. 1961) (“[T]he tolling provision of [35 U.S.C. § 286] is as much for the benefit of the Government as it is for the benefit of patentees. It permits Government agencies to dispose of such claims outside of court.”). “The tolling period under 35 U.S.C. § 286 is equal to the shorter of: (i) six years or (ii) the time between the receipt of the claim by the government and the mailing of a notice of denial of the claim by that agency or department.” McCreary v. United States, 35 Fed. Cl. 533, 545 (1996).

In order to satisfy the statutory requirement of a “written claim for compensation,” “a writing must be calculated to make a Government officer reasonably aware that a claim is being made.” Motorola, Inc. v. United States, 13 Cl. Ct. 420, 428 (1987). Thus, “[i]n determining the applicability of the tolling provision of 35 U.S.C. § 286 . . . the decisive question is whether the patent owner’s notice to the Government of its claim for infringement is sufficiently detailed to afford the Government a realistic opportunity to consider and settle the claim.” Custer, 622 F.2d at 558.<sup>12</sup>

Ross-Hime sent three letters to NASA between June 24, 2000, and October 1, 2001. The first letter, sent by Mr. Rosheim to Chris Culbert at NASA Johnson Space Center, set forth Ross-Hime’s position that “[r]egarding the Robonaut Hand I believe that NASA is infringing on one of our basic patents (see enclosure).” J. Ex. 4. The enclosure was likely the ’580 patent, according to Mr. Rosheim, although he could not be certain. Tr. 350, 386 (Sept. 27, 2017). The record does not include a response by NASA.

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<sup>12</sup> Defendant asserts that an administrative claim must state a demand for a “sum certain” to constitute a “written claim for compensation” under 35 U.S.C. § 286. However, Defendant relies exclusively on cases addressing claims submitted under the Contract Disputes Act, 41 U.S.C. § 7101 et seq., and the Federal Tort Claims Act, 28 U.S.C. § 2674. These cases are inapposite. The Federal Acquisition Regulation mandates that a “claim” include a demand for “a sum certain.” 48 C.F.R. § 2.101 (2017). Similarly, the implementing regulations under the Federal Tort Claims Act expressly require that a claim contain a demand for “a sum certain.” 28 C.F.R. § 14.2(a) (2018). Here, Section 286 makes no mention that a claim demand a sum certain.

About a year later, on July 22, 2001, David Jasper, Ross-Hime's Chief Executive Officer, sent a letter to Walter Guy, NASA's "manager of an umbrella group" that "encompassed all robotics" at the Johnson Space Center, stating that the '644 patent "reads on patents held by Ross-Hime Designs" and that due to that perceived "overlap of our existing patents" Ross-Hime was "seeking restitution including license fees and possible damages." J. Ex. 5; Tr. 359 (Sept. 27, 2017). NASA's Hardie Barr, of Johnson Space Center's Office of Patent Counsel, responded to Ross-Hime's July 22, 2001 letter on August 16, 2001, requesting "more specific information regarding the reason for" Ross-Hime's concerns that NASA infringed its '580 patent. J. Ex. 6. Ross-Hime provided the requested information in a letter dated September 1, 2001. Tr. 319-21, 336-38 (Sept. 27, 2017).

Despite comprehensive searches, neither party could locate a copy of Ross-Hime's September 1, 2001 letter. Tr. 416, 475-76 (Sept. 27, 2017). Nonetheless, its contents can be gleaned from NASA's September 13, 2001 response. Mr. Jasper testified that he has no doubt that quotes from the September 1, 2001 letter included in NASA's September 13, 2001 are accurate. Tr. 320-23 (Sept. 27, 2017). The September 13, 2001 letter, whose subject line stated "Letter: David P. Jasper, Ross-Hime Designs, Inc. to Hardie Barr, NASA Johnson Space Center, dated September 1, 2001," recounted Ross-Hime's claims in its September 1, 2001 letter and set out NASA's position on Ross-Hime's claims that NASA infringed its patents:

- Ross-Hime's September 1, 2001 letter addressed NASA's "implementation of a hand" and addressed the "differential drive of the thumb and dexterous finger [that] is a very basic concept protected by [Ross-Hime's] patent #5967580 (specifically claim #1)." J. Ex. 7, at 1.
- NASA wished "to resolve any perception that NASA has, somehow, deprived Ross-Hime Designs, Inc. of any rights." Id.
- Mr. Barr identified specific differences between the '580 patent "and [NASA's] implementation of the hand as described in [NASA's] '644 patent." Id.
- Mr. Barr concluded that he could "not agree that the Ross-Hime Designs, Inc. patent (U.S. Patent No. 5,967,580 reads on any implementation of the NASA hand as described in U.S. Patent No. 6,244,644." Id. at 2.

Ross-Hime's David Jasper responded to NASA's September 13, 2001 letter in an October 1, 2001 letter, addressed to attorney Hardie Barr in NASA's Office of Patent Counsel, reiterating that "the purpose of our communication is to seek proper licensing agreements for those implementations that read on our issued patents." J. Ex. 8. Ross-Hime disputed NASA's contention in its September 13, 2001 letter that the '580 patent was distinguishable from the Robonaut 1A, and reiterated that Ross-Hime was requesting that NASA obtain a license from Ross-Hime for NASA's alleged infringement of the '580 patent. Id.

A license is a means of obtaining compensation for use of intellectual property. See, e.g., Pratt & Whitney Can., Inc. v. United States, 17 Cl. Ct. 777, 790 (1989), aff'd, 897 F.2d 539 (Fed. Cir. 1990) (letter from the plaintiff asserting infringement and offering to discuss a license "stated the elements of an administrative claim"). Mr. Jasper testified that Ross-Hime's purpose in sending the July 22, 2001 letter was to "negotiate a license" because Ross-Hime believed NASA

was “using our technology and . . . should be paying for it.” Tr. 315 (Sept. 27, 2017). The record of the parties’ correspondence establishes that Ross-Hime’s claim in its September 1, 2001 letter was clear: Robonaut 1A infringed Ross-Hime’s ’580 patent because of specifically identified overlap between the claims in ’580 patent and Robonaut 1A, and Ross-Hime was seeking compensation by way of a license agreement. Accordingly, Ross-Hime’s September 1, 2001 letter constituted a claim that NASA’s Robonaut 1A infringed the ’580 patent and NASA owed Ross-Hime compensation. As recounted in NASA’s September 13, 2001 letter, this claim was sufficiently detailed to permit NASA to resolve it. As such, Ross-Hime’s September 1, 2001 letter began tolling the statute of limitations under 35 U.S.C. § 286 until NASA denied its claim in writing or the tolling period expired. 35 U.S.C. § 286; see Dynamics Corp. of Am. v. United States, 5 Cl. Ct. 591, 598 (1984), aff’d in part and rev’d in part on other grounds, 766 F.2d 518 (Fed. Cir. 1985) (tolling statute of limitations under § 286 where the plaintiff had sent letters to 13 departments and agencies sufficiently identifying the patent at issue and the accused items); cf.; Motorola, 13 Cl. Ct. at 428 (declining to apply § 286 where the purported infringement claim was a single sentence in a bid stating that a specified Motorola patent “applies against the transponder of the subject proposal” as illustrated in an accompanying schematic drawing, and did not include “a request for compensation, either express or implied.”).

Although Ross-Hime’s September 1, 2001 letter was an administrative claim, it only addressed Robonaut 1A because, as of September 2001, Robonaut 1A was the only Robonaut in existence. NASA manufactured the first Robonaut 1A hand in 1999, and the second Robonaut 1A hand in 2000. NASA did not manufacture Robonaut 1B until 2002. See J. Ex. 38, at 5; Tr. 94-96 (Sept. 26, 2017). Ross-Hime did not submit additional correspondence to NASA after Robonaut 1B was manufactured in 2002. As such, only Robonaut 1A was the subject of Ross-Hime’s September 1, 2001 administrative claim.

Defendant contends that even if Ross-Hime submitted an administrative claim, NASA’s September 13, 2001 letter to Ross-Hime denied that claim and the statute of limitations stopped being tolled as of that date. The Court disagrees. Section 286 tolls the statute of limitations from the date the Government receives a written claim for compensation until “the date of mailing by the Government of a notice to the claimant that his claim has been denied . . .” 35 U.S.C. § 286. Here, the Government did not provide “notice” to Ross-Hime that its claim had been denied. In his September 13, 2001 response to Ross-Hime’s September 1, 2001 letter, Hardie Barr, of NASA’s Office of Patent Counsel at the NASA Johnson Space Center, listed “specific differences between Claim 1 of” the ’580 Patent and NASA’s “implementation of the [Robonaut] hand.” J. Ex. 7. While Mr. Barr could not “agree that the Ross-Hime Designs, Inc. patent (U.S. Patent No. 5,967,580) reads on any implementation of the NASA hand as described in U.S. Patent No. 6,244,644,” he did not expressly deny Ross-Hime’s claim or indicate that his letter constituted the agency’s final action. Id.; cf. Unitrac, 113 Fed. Cl. at 165 (concluding that claim was denied where agency letter provided that it was a “final agency action”); Ideal Innovations Inc. v. United States, No. 17-889C, 2018 WL 2949464, at \*6 (Fed. Cl. June 13, 2018) (claim was denied where agency letter expressly stated that “we have denied your Administrative Claim”). Ross-Hime itself did not view NASA’s September 13, 2001 letter as a denial of its claim, as it responded to NASA’s September 13, 2001 letter on October 1, 2001, disputing NASA’s assertion that Robonaut 1 was distinguishable from the ’580 patent. J. Ex. 8. NASA did not send Ross-Hime further correspondence. Tr. 324, 368-69 (Sept. 27, 2017).

In order for agency conduct to constitute “final agency action” such that a claim is ripe for judicial review, it must satisfy two factors: the action must mark the “consummation of the agency’s decision making process—it must not be of a merely tentative or interlocutory nature,” and “must be one by which rights or obligations have been determined or from which legal consequences will flow.” Sys. Application & Techs., Inc. v. United States, 691 F.3d 1374, 1384 (Fed. Cir. 2012) (internal citations and quotation marks omitted). Mr. Barr’s September 13, 2001 letter lacked indicia that it constituted “final agency action” or was the conclusion of the agency’s decisionmaking process.

Contrary to Defendant’s suggestion, Mr. Barr’s September 1, 2001 letter could not have constituted a denial of Ross-Hime’s claim under NASA’s governing procedures at the time.<sup>13</sup> NASA’s procedures were not published regulations, and there is no suggestion in the record that Ross-Hime was aware of NASA’s internal procedures governing administrative patent infringement claims as of the dates of its correspondence with NASA between 2000 and 2001. NASA’s procedures did not authorize Mr. Barr to deny claims. Those procedures provided that “[a]ll correspondence appearing to allege patent . . . infringement, whether or not the correspondence satisfies all of the requirements of a claim, should be forwarded to Headquarters, along with any information known about the alleged claim, for processing and reply.” Dvorscak Decl. Attach. 2, at 2. NASA’s procedures further required that NASA Headquarters either “inform the prospective claimant that a claim has not been made, and specifically identify the information needed to perfect the claim,” or otherwise conduct a preliminary investigation and thereafter acknowledge the claim. Id. at 2-3.

NASA’s procedures specified that “claims should not be denied or settlement negotiations initiated without the prior approval of Headquarters.” Id. at 6. NASA Headquarters had the exclusive authority to reject a claim, and Mr. Barr, a patent counsel at a local NASA installation, did not have such authority. Tr. 470-71 (Sept. 27, 2017). NASA’s procedures further provided that if Headquarters determined that the claim should be denied, “[t]he claimant should be provided with the basis on which the claim is being denied . . . .” Dvorscak Decl. Attach. 2, at 9. NASA did not forward Ross-Hime’s letters to NASA Headquarters, and Headquarters did not deny Ross-Hime’s claim, or inform Ross-Hime of “the basis on which the claim [was] being denied.” Id.; Tr. 473-74 (Sept. 27, 2017). Mark Dvorscak, Intellectual Property counsel at NASA Headquarters, testified that if Ross-Hime submitted an effective administrative claim that was not acted upon by Headquarters, then the statute of limitations would be tolled for six years. Tr. 474 (Sept. 27, 2017). Here, because NASA never denied Ross-Hime’s claim, the statute of limitations with respect to Robonaut 1A was tolled under § 286 for six years from NASA’s receipt of Ross-Hime’s

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<sup>13</sup> Mark Dvorscak, Intellectual Property counsel at NASA Headquarters, testified that NASA had procedures in place for handling administrative claims for patent infringement at the time of Ross-Hime’s correspondence with NASA regarding the Robonaut. Tr. 446-49 (Sept. 27, 2017); see Dvorscak Decl. Years later, on March 13, 2012, NASA’s internal procedures were codified at 14 C.F.R. § 1245.200-205. Rules and Regulations for National Aeronautics and Space Administration, 77 Fed. Reg. 14,686-01 (Mar. 13, 2012) (codified at 14 C.F.R. Part 1245). Prior to the notice of proposed rulemaking on July 26, 2011, NASA’s procedures were not published in the Code of Federal Regulations. Tr. 469 (Sept. 27, 2017).

administrative claim on September 1, 2001, until September 1, 2007. See McCreary, 35 Fed. Cl. at 545-46; Dynamics, 5 Cl. Ct. at 598.

### **Conclusion**

Ross-Hime's claim that Robonaut 1 infringes claims 1, 3, 4, 5, 7, 8, 10, and 14 of the '580 patent accrued in December 1999, with respect to the first hand of Robonaut 1A, in December 2000, with respect to the second Robonaut 1A hand, and in October 2002, with respect to Robonaut 1B. Ross-Hime's September 1, 2001 letter to NASA was an administrative claim seeking compensation for NASA's patent infringement under 35 U.S.C. § 286 with respect to Robonaut 1A, the only Robonaut that existed at that time. Because NASA never denied Ross-Hime's claim, the statute of limitations regarding Robonaut 1A was tolled from September 1, 2001, until September 1, 2007, while its administrative claim was pending. Ross-Hime timely filed this action on April 1, 2011, with respect to Robonaut 1A.

The statute of limitations was not tolled with respect to Ross-Hime's cause of action for infringement as to Robonaut 1B. Ross-Hime's September 1, 2001 administrative claim did not address Robonaut 1B, and Ross-Hime did not submit any correspondence to NASA after Robonaut 1B was manufactured in 2002. Accordingly, Ross-Hime was required to file suit no later than October 2008, with respect to Robonaut 1B.

Because Ross-Hime's filing of this action on April 1, 2011, was within the jurisdictional time limitations of § 2501 with respect to Robonaut 1A, but outside the jurisdictional time limitations with respect to Robonaut 1B, Defendant's motion is **GRANTED IN PART** as to Robonaut 1B.

s/Mary Ellen Coster Williams  
**MARY ELLEN COSTER WILLIAMS**  
**Senior Judge**