

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

**ROKIOT USA, LLC,**

**Plaintiff,**

**v.**

**IKEA NORTH AMERICA SERVICES,  
LLC,**

**Defendant.**

**C.A. No. 25-165**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Rokiote USA, LLC (“Rokiote”) files this suit against Defendant IKEA North America Services, LLC (“IKEA”) for infringement of U.S. Patent Nos. 7,895,257 and 8,631,063 (collectively, the “Asserted Patents”). Defendant IKEA infringes the Asserted Patents by providing, among other things, the IKEA Smart Home Platform (“Smart Home”) including the IKEA Smart Home products (light bulbs, air purifiers, motion sensors, remote control devices, blinds, air quality sensors, speakers, etc.), the TRÅDFRI gateway, the DIRIGERA hub, and the Smart Home servers.

**THE PARTIES**

1. Plaintiff Rokiote is a Delaware limited liability company headquartered in Winters, Texas. Rokiote’s founder, Dr. Sumi Helal is an active pioneer in the Internet of Things (“IoT”) space. Among his many inventions, the Asserted Patents represent Dr. Helal’s foundational work developing an IoT platform enabling integration of heterogeneous devices. IKEA practices Dr. Helal’s inventions claimed in Rokiote’s patents.

2. IKEA North America Services, LLC is a limited liability company organized under

the laws of the Commonwealth of Virginia, with its principal office address located at 420 Alan Wood Road, Conshohocken, Pennsylvania 19428. IKEA is involved in the manufacture, sale, marketing, and distribution of certain IKEA-branded software, hardware, and IoT platforms in Texas, this judicial district, and the United States, including those accused of infringement in this case.

### **JURISDICTION AND VENUE**

3. This is a patent suit brought under the United States Patent Act, namely 35 U.S.C. §§ 271, 281, 283, 284, and 285, among other laws. This Court has subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338.

4. This Court has personal jurisdiction over IKEA because it has substantial, systematic, and continuous contacts within this judicial district. IKEA actively directs sales and marketing activities related to the accused products throughout the United States, including Texas and this judicial district. IKEA has also availed itself of the laws and protections of the United States (including in the filing of lawsuits) and submitted itself to and sought rights from United States governmental agencies in the furtherance of its business in the United States, including Texas and this judicial district.

5. IKEA operates a website at [www.ikea.com](http://www.ikea.com) that publishes sales and marketing information directed to the United States, including Texas and this judicial district.<sup>1</sup> *See, e.g.*, [www.ikea.com/us/en](http://www.ikea.com/us/en); <https://www.ikea.com/us/en/cat/smart-home-hs001/> (identifying accused products in United States); <https://www.ikea.com/us/en/this-is-ikea/about-us/>. IKEA registered to

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<sup>1</sup> IKEA also maintains an active presence on social media with regard to the accused products directed to the United States and this judicial district. *See, e.g.*, <https://www.linkedin.com/company/ikea/> (LinkedIn); <https://www.youtube.com/user/IKEAUSA> (YouTube); <https://www.facebook.com/IKEAUSA/> (Facebook); <https://www.instagram.com/ikeausa/#> (Instagram); [https://www.tiktok.com/@ikea\\_usa](https://www.tiktok.com/@ikea_usa) (TikTok); <https://www.pinterest.com/ikeausa/> (Pinterest); <https://x.com/ikeausa> (X, formerly known as “Twitter”).

do business in Texas and has considered Texas law, rules, and regulations in conducting business in Texas, including in connection with its sales and marketing of the accused products. At least seven IKEA-related entities are registered to do business in Texas.<sup>2</sup>

6. IKEA makes, manufactures, and/or sells products and systems accused of infringement, including the IKEA Smart Home Platform, the IKEA Smart Home products, the TRÅDFRI gateway, the DIRIGERA hub, and the Smart Home servers. In addition, IKEA sells and offers for sale the accused products directly through online marketing and sales and through its United States store locations including those located in Texas and this judicial district. A substantial portion of IKEA's revenue, sales, and marketing activities (including offers for sale) are made, directed to, and/or occur in Texas and this judicial district. IKEA pays employees in the United States to sell, market, and offer for sale the accused products, including in Texas and this judicial district. IKEA maintains control and direction over these employees, and they act for the benefit of IKEA.

7. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b). IKEA has committed acts of infringement as described herein in Texas and in this judicial district and maintains a regular and established place of business in this judicial district (where it has committed acts of infringement) located at 7171 Ikea Drive, Frisco, Texas 75034. IKEA may be served with process through its registered agent CT Corporation System at 1999 Bryan Street, Suite 900, Dallas, Texas 75201.

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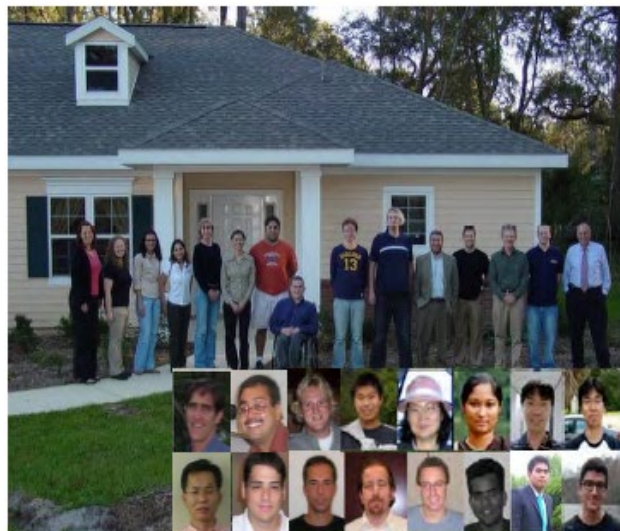
<sup>2</sup> IKEA has many related entities registered to do business in Texas, including IKEA PROPERTY INC.; IKEA U.S. East, LLC; IKEA US RETAIL LLC; Ikea North America Services, LLC; IKEA Energy US, LLC; Ikea Distribution Services, Inc.; and IKEA Home Services LLC.

## BACKGROUND

### A. PLAINTIFF ROKIOT

8. Rokiot was founded by Abdelsalam (“Sumi”) Helal, Ph.D, a widely recognized pioneer in the IoT space. Professor Helal is a senior faculty member in the Computer & Information Science and Engineering Department at the University of Florida and serves as Director of its Mobile and Pervasive Computing Laboratory. Dr. Helal is a Fellow of the ACM, IEEE, AAAS, AAIA, IET, and a member of Academia Europaea. His active areas of research focus on architectural and programmability aspects of the IoT, service-oriented IoT architectures, IoT edge intelligence, and pervasive/ubiquitous systems and their human-centric applications, particularly in the Digital Health area.

9. At the University of Florida, Dr. Helal co-founded and directed the Gator Tech Smart House, a real-world deployment project aimed at identifying key barriers to and opportunities for implementing the Smart Home concept. The Gator Tech Smart House was an experimental facility for applied research, development, and validation of IoT technology in the domains of elder care and digital health.



The Gator Tech Smart House garnered widespread attention as a showcase of assistive technologies developed by Dr. Helal and his co-inventors that are enabled by the inventions claimed in the Asserted Patents. Notable features of the Gator Tech Smart House included a smart mailbox that sensed when mail arrived, window blinds that automatically controlled light and privacy, a smart bed that monitored sleep patterns, and a floor that tracked the occupants' level of activity and detected a fall.

10. In 2006, Dr. Helal co-founded Pervasa, Inc., a University of Florida technology startup focused on commercializing the modular architecture successfully proven in the Gator Tech Smart House. Pervasa's Atlas platform and middleware enabled a plug-and-play framework for sensor/actuator networks. Atlas devices appeared in the framework automatically as they were added and powered on. Atlas applications included smart homes, healthcare, and asset tracking.



11. While he is a technologist at heart, Dr. Helal has founded ventures to commercialize IoT and Digital Health technologies and has brought important inventions to market. In 2007,

Pervasa won the Silver “Best of Sensor Expo Award” beating University of California Berkeley’s Crossbow, which took the Bronze.

12. The Patent Office recognized the efforts of Dr. Helal and his co-inventors King, Bose, Pickles, Russo, Ploeg, Zabadani, and Kouche, by awarding patents such as those infringed by IKEA that cover Rokiot’s novel IoT platform technologies. Leading technology companies have recognized Dr. Helal’s inventions and licensed the patents protecting them.

**B. THE ASSERTED PATENTS**

13. Rokiot is the owner, by assignment, of all rights, title, and interest in and to U.S. Patent Nos. 7,895,257 (the “’257 Patent”) and 8,631,063 (the “’063 Patent”), both titled “Modular Platform Enabling Heterogeneous Devices, Sensors, and Actuators to Integrate Automatically into Heterogeneous Networks.” The University of Florida assigned the Asserted Patents to the original inventors in 2013, and they assigned their interests to Rokiot in 2017.

14. A true and correct copy of the ’257 Patent is attached as **Exhibit A**.

15. A true and correct copy of the ’063 Patent is attached as **Exhibit B**.

16. As the sole owner of the ’257 and ’063 Patents, Rokiot holds all substantial rights in and under the patents, including the right to grant sublicenses, exclude others, and to enforce, sue, and recover damages for past, present, and future infringement.

17. The United States Patent Office issued the ’257 Patent on February 22, 2011, and issued the ’063 Patent on January 14, 2014. The ’257 and ’063 Patents are valid, enforceable, and were duly issued in full compliance with Title 35 of the United States Code.

18. The Asserted Patents generally are directed to a platform for integrating heterogeneous devices (e.g., sensors and actuators) and applications. The specification of the Asserted Patents describes the applicability of the patented technology to remotely controlled appliances,

lights, doors, coffee machines, temperature controls, home theater systems, communication systems, security cameras, surveillance equipment, and the like. '063 Patent at 1:22-26.<sup>3</sup> The Asserted Patents address problems related to deploying such systems and integrating various devices.

19. Previous systems lacked a refined way of achieving “modularity” where devices could be added to a system without extensive integration and configuration overhead. Previous systems that attempted to provide scalable solutions focused heavily on sensors (e.g., temperature sensors, pressure sensors) without sufficient regard for scaled integration of actuators.

20. The claimed subject matter of the Asserted Patents describes, among other things, scalable, reliable, and secure data ingestion (e.g., from sensors) and command and control messaging (e.g., to actuators). The Asserted Patents relate to platforms that provide a uniform interface to any type of sensor, actuator, or connected device. '063 Patent at 5:34-36.

21. By providing the capability to represent connected devices automatically as software services to programmers and users, a larger number of devices may be supported on a platform. '063 Patent at 4:8-30. The inventors recognized a “need for a modular, service-oriented sensor and actuator platform specifically designed to support the development of scalable pervasive computing spaces.” *Id.* at 4:28-30. They further recognized that “development of smart spaces is very different in goals and requirements from the typical sensor network application.” *Id.* at 5:21-22.

22. Benefits provided by the claimed inventions include: (i) interchangeability of various sensors and actuators without the need for cumbersome reworking of the platform and/or associated software; (ii) enabling users of the platform to control, and interact with, the sensors and

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<sup>3</sup> The '063 Patent and '257 Patent share a common specification. The Complaint cites to the '063 Patent, but parallel citations may be found in the '257 Patent.

actuators in a higher-level language without the need to program at the hardware level of the various devices; and (iii) interchangeability of the hardware modules (e.g., one communication module can be interchanged with another to allow for the use of different networking technologies without reworking of other modules). '063 Patent at 5:52-63.

23. Components of a disclosed embodiment include a hardware platform, a middleware module, and one or more “software services” that represent an active object. In the normal operation described in the Asserted Patents, the hardware platform communicates with at least two active objects, where at least one active object is an actuator and one active object is a sensor. Figures 1 (showing an example of aspects of an embodiment of the claimed inventions), 7 (showing overall information flow through an embodiment of the claimed inventions), and 8 (showing an example of aspects of an embodiment of the claimed inventions) of the Asserted Patents are examples of the overall architecture, system, and method. Aspects of the architecture, systems, and methods as further described in the specification are claimed in the Asserted Patents.

### **C. DEFENDANT IKEA**

24. IKEA makes, uses, sells, offers for sale, imports, licenses, tests, develops, and/or distributes IoT platforms and systems that embody the asserted claims of Rokiot’s Asserted Patents.

25. IKEA’s IoT platform and systems include the IKEA Smart Home Platform, the IKEA Smart Home products, the TRÅDFRI gateway, the DIRIGERA hub, and the Smart Home servers. IKEA markets its Smart Home platforms and systems and describes these products on its website pages. *See, e.g.,* [www.ikea.com/us/en](http://www.ikea.com/us/en); <https://www.ikea.com/us/en/cat/smart-home-hs001/>.

26. According to IKEA, the TRÅDFRI gateway and IKEA Home smart app are the



heart of your smart home. By adding the DIRIGERA hub, IKEA touts, “you get even more functions and digital features from your smart products, and you are in full control via the IKEA Home smart app. Change to purple party lighting in the living room, check the air purifier’s status before going to bed, turn off the coffee machine, make sure the children’s midnight-potty-break night lamp is on, or automatically run a Scene that rolls down the blinds at sunset – all from the same screen.” <https://www.ikea.com/us/en/customer-service/product-support/smart-home-dirigera-hub/#2ccd0570-2518-11ed-bfca-c7085b10f7d7>.

27. IKEA’s description of its Smart Home IoT platform and systems demonstrates that they satisfy each and every element of one or more of the claims of each of the Asserted Patents. IKEA publishes detailed descriptions and instructions for operating the relevant IKEA platform and system architectures are published on various IKEA websites, including, for example: <https://www.ikea.com/us/en/product-guides/ikea-home-smart-system/>; <https://www.ikea.com/us/en/customer-service/product-support/app-gateway/#81030aa0-0113-11ed-8964-f35d22cfc362>; and <https://www.ikea.com/us/en/customer-service/product-support/smart-home-dirigera-hub/>.

28. IKEA provides products, infrastructure, and services including servers, cloud-server infrastructure, IoT gateways, hubs, middleware, software, hardware, drivers, and interfaces to facilitate communication between IoT devices (e.g., user equipment) and software applications in various infringing combinations. For convenience, these accused instrumentalities (e.g., including any combination of components) may be referred to herein as IKEA’s “IoT System,” “IoT Products,” or “IoT Systems.”

29. IKEA makes, uses, sells, offers for sale, imports, licenses, tests, develops, and/or distributes in the United States its IoT Systems and IoT Products systems, including the products and infrastructure (e.g., hardware platform, IoT cloud products and service), hubs, apps, kits, and

automation systems described herein.

30. IKEA's Smart Home IoT Systems practice one or more claims of each of the '063 and '257 Patents.

31. IKEA owns, operates, maintains, and/or controls (either directly or through a wholly owned subsidiary or related entity) the [www.ikea.com](http://www.ikea.com) website and related domains (e.g., [ikea.com/us/en](http://ikea.com/us/en) and [ikea.com/us/en/cat/smart-home-hs001/](http://ikea.com/us/en/cat/smart-home-hs001/)) and publishes information about the infringing products. IKEA publishes information about its IoT products and services at these websites, and Rokiote hereby incorporates by reference the IKEA IoT System-related content of the domains (and sub-domains) and web pages (and linked web pages) referenced in this Complaint.

32. IKEA's IoT System includes a hardware platform (e.g., IKEA's hub and server infrastructure) and a middleware module including servers, cloud-server infrastructure, hubs, software, hardware, drivers, and interfaces. The IoT system's middleware is in or executed on the hardware platform and intermediates between the active objects (e.g., deployed devices including sensors and actuators) and applications (e.g., cloud or IoT applications). For example, the IKEA Matter-compatible Dirigera translates instructions sent via a Matter hub to compatible IKEA devices. IKEA includes Matter with Dirigera as a default option, and Dirigera smart hubs are Matter-enabled "out of the box."

33. "DIRIGERA hub is a Matter bridge, this means that the smart products connected to the DIRIGERA hub are compatible with any smart home products that use the Matter standard." <https://www.ikea.com/us/en/p/dirigera-hub-for-smart-products-white-smart-50503414/>.

34. For each active object, IKEA's middleware generates software services that represent the active objects. IKEA may refer to these software services and related functionality as "products" within its IoT system, and examples include lights, remotes, sound, air, blinds, sensors,

and smart plugs. Products are deployed devices in the IKEA IoT System. The software services (generated to represent active objects) may be based on a driver that includes information and behavioral components of the active objects.

35. IKEA provides for communication between applications (written in high-level languages) and active objects through use of at least one software service (e.g., the “product”) as described above. IKEA’s IoT System includes applications written in “Swift” and provides means for communication through HTTP calls. The middleware converts the communication (including commands) into low-level commands that the active objects can understand and act upon, including, for example, the IKEA smart lighting products’ use of ZigBee Light Link. The IKEA IoT System also includes applications configured to receive useable data, including, for example, air quality data from ZigBee clusters. The middleware converts “raw data” received from an active object to usable data.

36. The claims of the Asserted Patents, as described below, are satisfied by the IKEA Smart Home IoT System as described above.

### **COUNT I**

#### **INFRINGEMENT OF U.S. PATENT NO. 7,895,257**

37. Rokiot incorporates the preceding paragraphs herein by reference.

38. IKEA jointly (with, for example, its customers and partners) and individually practices the ’257 Patent by providing, testing, using, distributing, developing, making, selling, offering for sale, importing, and/or licensing the accused instrumentalities without consent or authorization.

39. The facts alleged above, including the referenced publicly available materials published by IKEA, show that IKEA practices each and every element or step of at least claims 1, 2,

3, 4, 13, 14, 16, 17, 18, 27, 28, 32, 33, 34, and 35 of the '257 Patent.

40. IKEA has known about the '257 Patent and how the accused instrumentalities infringe since at least February 15, 2024. Rokiot and IKEA engaged in pre-filing licensing discussions, providing actual notice of infringement by virtue of IKEA's activities relating to the accused products. IKEA has further notice and knowledge of the '257 Patent by the service of this Complaint.

41. IKEA directly infringes each and every asserted claim literally and, to the extent an element or step is found not to be literally met by or in the accused instrumentalities, under the doctrine of equivalents.

42. IKEA, individually and jointly (with, for example, its customers and partners), infringes the '257 Patent. To the extent that all steps or limitations of any asserted claim are not practiced by a single entity, then all steps or limitations are practiced by, controlled by, or attributable to IKEA.

43. IKEA conditions its customers' receipt of IKEA's services upon the integration and/or incorporation of IKEA's software and scripts, and IKEA dictates the manner and timing of performance (e.g., pursuant to APIs and SDKs) to direct and control the performance of processes that practice the subject matter claimed in the '257 Patent.

44. IKEA's acts—including inducing, encouraging, aiding, abetting, directing, importing, and instructing others, namely its customers, developers, and end users of the accused instrumentalities, including by providing user guides, instruction materials, and customer support, to practice the '257 Patent—constitute indirect infringement under 35 U.S.C. §§ 271(b)-(c).

45. IKEA provides, makes, sells, uses, imports, licenses, offers to sell, and promotes

the IKEA Smart Home IoT platform, system, and components and the specifically accused products having features and functionality described herein with the specific intent that end users and customers use the accused instrumentalities in an infringing manner on and in conjunction with the IKEA Smart Home IoT platform, system and components.

46. As alleged herein, the IKEA Smart Home IoT platform, system, and components are material to practicing the '257 Patent, have no substantial non-infringing use, and are known to IKEA by notice to be specially made or adapted for use in infringing the '257 Patent.

47. Rokiot has been harmed as a result of IKEA's infringing conduct. IKEA is liable to Rokiot in an amount that adequately compensates Rokiot for IKEA's infringement, which compensation cannot be less than a reasonable royalty together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

## **COUNT II**

### **INFRINGEMENT OF U.S. PATENT NO. 8,631,063**

48. Rokiot incorporates the preceding paragraphs herein by reference.

49. IKEA jointly (with, for example, its customers and partners) and individually practices the '063 Patent by providing, testing, using, distributing, developing, making, selling, offering for sale, importing, and/or licensing the accused instrumentalities without consent or authorization.

50. The facts alleged above and publicly available materials published by IKEA show that IKEA practices each and every element or step of at least claims 1, 2, 3, 9, 12, 13, 16, 17, 18, 19, 20, 21, 24, 30, 31, 35, 37, 38 of the '063 Patent.

51. IKEA has known about the '063 Patent and how the accused instrumentalities in-

fringe since at least February 14, 2024. Rokiot and IKEA engaged in pre-filing licensing discussions, providing actual notice of infringement by virtue of IKEA's activities relating to the accused products. IKEA has further notice and knowledge of the '063 Patent by service of this Complaint.

52. IKEA directly infringes each and every asserted claim literally and, to the extent that an element or step is found not to be literally met by or in the accused instrumentalities, under the doctrine of equivalents.

53. IKEA, individually and jointly (with, for example, its customers and partners), infringes the '063 Patent. To the extent that all steps or limitations of any asserted claim are not practiced by a single entity, then all steps or limitations are practiced by, controlled by, or attributable to IKEA.

54. IKEA conditions its customers' receipt of IKEA's services upon the integration and/or incorporation of IKEA's software and scripts, and IKEA dictates the manner and timing of performance (e.g., pursuant to APIs and SDKs) to direct and control the performance of processes that practice the subject matter claimed in the '063 Patent.

55. IKEA's acts—including inducing, encouraging, aiding, abetting, importing, directing, and instructing others, namely IKEA's customers, developers, and end users of the accused instrumentalities, including by providing user guides, instruction materials, and customer support, to practice the '063 Patent—constitute indirect infringement under 35 U.S.C. §§ 271(b)-(c).

56. IKEA provides, makes, sells, uses, imports, licenses, offers to sell, and promotes the IKEA IoT System and platform and the specifically accused products having features and functionality described herein with the specific intent that end users and customers use the accused instrumentalities in an infringing manner on and in conjunction with the IKEA IoT System and platform.

57. As alleged herein, the IKEA IoT System and components are material to practicing the '063 Patent, have no substantial non-infringing use, and are known to IKEA by notice to be specially made or adapted for use in infringing the '063 Patent.

58. Rokiot has been harmed as a result of IKEA's infringing conduct. IKEA is liable to Rokiot in an amount that adequately compensates Rokiot for IKEA's infringement, which compensation cannot be less than a reasonable royalty together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

#### **NOTICE**

59. Rokiot has complied with the notice requirements of 35 U.S.C. § 287 and provided actual notice of infringement prior to filing this Complaint.

#### **JURY DEMAND**

60. Rokiot hereby demands a trial by jury on all claims, issues, and damages so triable.

#### **PRAYER FOR RELIEF**

61. Rokiot prays for the following relief:

- (a) That IKEA be summoned to appear and answer;
- (b) That the Court enter an order declaring that IKEA has infringed the '257 and '063 Patents;
- (c) That the Court find this to be an exceptional case under 35 U.S.C. § 285, and award Rokiot its reasonable attorney's fees;
- (d) That the Court grant and award Rokiot judgment against IKEA for all actual, compensatory, consequential, special, punitive, exemplary, increased, and/or statutory damages, including any applicable additional damages pursuant to 35 U.S.C. § 284, and, if necessary, an accounting of

all damages; pre- and post-judgment interest as allowed by law; ongoing, post-judgment damages; and reasonable attorney's fees, costs, and expenses incurred in this action; and

- (e) That Rokiot be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: February 11, 2025

Respectfully submitted,

s/Christopher T. Bovenkamp

STEVEN CALLAHAN

Texas State Bar No. 24053122

scallahan@ccrglaw.com

CHRISTOPHER T. BOVENKAMP

Texas State Bar No. 24006877

cbovenkamp@ccrglaw.com

CONNOR SCOTT

Texas State Bar No. 24115362

cscott@ccrglaw.com

**CHARHON CALLAHAN**

**ROBSON & GARZA, PLLC**

3333 Lee Parkway, Suite 460

Dallas, Texas 75219

Telephone: (214) 521-6400

Telecopier: (214) 764-8392

*Counsel for Plaintiff ROKIOT USA, LLC*