

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

OLLNOVA TECHNOLOGIES LTD.,

Plaintiff,

v.

ECOBEE TECHNOLOGIES ULC d/b/a
ECOBEE,

Defendant.

Case No. 2:22-cv-00072-JRG

The Honorable J. Rodney Gilstrap

DEFENDANT’S PRELIMINARY LOCAL P.R. 3-3 AND 3-4 DISCLOSURES

Pursuant to the Court’s Docket Control Order dated June 3, 2022 (Dkt. 37) and Local Patent Rules 3-3 and 3-4, Defendant ecobee Technologies ULC d/b/a ecobee (“Defendant” or “ecobee”) submits these Preliminary Invalidity Contentions (“Invalidity Contentions”) and an accompanying production.¹

I. Scope and Reservation of Rights

According to Plaintiff Ollnova Technologies Ltd.’s (“Plaintiff” or “Ollnova”) P.R. 3-1 and 3-2 Disclosure of Asserted Claims and Infringement Contentions dated May 4, 2022, Plaintiff’s Amended Preliminary Infringement Contentions, served on August 18, 2022, and Plaintiff’s Revised Amended Preliminary Infringement Contentions, served on August 29, 2022 (collectively, “Infringement Contentions”), Plaintiff is asserting that ecobee allegedly infringes:

- Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, 20, and 21 of U.S. Patent No. 8,224,282 (“the ’282 patent”) (“the ’282 Asserted Claims”);

¹ Pursuant to the Court’s Docket Control Order (Dkt. 37), ecobee made its technical document production in compliance with P.R. 3-4(a) on June 29, 2022. Therefore, the production accompanying these disclosures is made pursuant only to P.R. 3-4(b).

- Claims 1, 3, 5, 6, 8, 11, 12, 14, 15, 18, 20, and 21 of U.S. Patent No. 7,746,887 (“the ’887 patent”) (“the ’887 Asserted Claims”);
- Claims 1, 2, 3, 4, 5, 6, 10, 11, and 12 of U.S. Patent No. 7,860,495 (“the ’495 patent”) (“the ’495 Asserted Claims”); and
- Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, and 21 of U.S. Patent No. 8,264,371 (“the ’371 patent”) (“the ’371 Asserted Claims”).

The above patents are collectively referred to herein as the “Asserted Patents,” and the above claims are collectively referred to herein as the “Asserted Claims.”

In its Infringement Contentions, Ollnova also identifies the following alleged priority dates for the Asserted Claims:

- ’282 patent Asserted Claims: March 19, 2008
- ’887 patent Asserted Claims: April 12, 2006
- ’495 patent Asserted Claims: August 9, 2004
- ’371 patent Asserted Claims: January 3, 2008

If Ollnova later seeks to assert a specific earlier invention or priority date other than the date set forth above, ecobee reserves the right to revise, amend, and supplement these Invalidity Contentions, including to identify additional information supporting prior art identified herein, and/or additional prior art, to respond to such assertions.²

ecobee’s Invalidity Contentions are directed only to the Asserted Claims identified above (although ecobee reserves the right to seek invalidation of all claims of the Asserted Patents). To the extent that Ollnova is permitted to later alter this list of Asserted Claims, ecobee reserves the

² By identifying the alleged priority dates herein, ecobee does not concede—and reserves the right to dispute—the correct priority date for any asserted patent. In particular, as discussed below, ecobee disputes Ollnova’s identification of the priority date for any ’282 Asserted Claim, which Ollnova has not provided evidence to support despite such evidence being sought in, e.g., ecobee’s Interrogatory No. 4.

right to modify, amend, supplement or otherwise alter their Invalidity Contentions accordingly.

ecobee's Invalidity Contentions are preliminary, and do not address claim construction or non-infringement. ecobee reserves all rights with respect to such issues. These preliminary contentions are based on ecobee's current knowledge, understanding, and belief. ecobee has not yet completed its investigation, discovery, or analysis of information related to this action, and additional discovery (including from Ollnova or any third-party) may require ecobee to supplement or amend its Invalidity Contentions.³ ecobee reserves the right to amend or supplement its contentions accordingly, consistent with P.R. 3-6.

The parties have yet to begin the process of exchanging information regarding claim construction and the Court has not yet construed the Asserted Claims. ecobee therefore reserves the right to revise, amend, and supplement these Invalidity Contentions in view of the claim construction process and in particular after the Court's determination of the scope and meaning of any claim term or element. ecobee also reserve the right to revise, amend, and supplement these contentions, including to identify additional information supporting prior art identified herein, and/or additional prior art, depending upon the positions that Ollnova or its expert witnesses may take concerning claim interpretation, infringement, and/or invalidity issues.

ecobee further reserves the right to amend, supplement, or materially modify its Invalidity Contentions (i) in response to any claim construction, infringement and/or invalidity

³ For example, ecobee may issue subpoenas to third parties believed to have knowledge, documentation, and/or corroborating evidence concerning some of the prior art listed below, and/or additional prior art. These third parties include, without limitation, the authors, inventors, or assignees of the references and/or the sellers, manufacturers, or distributors of the products/systems listed in these disclosures. Discovery is ongoing and ecobee has not yet had an opportunity to depose any Ollnova witnesses or the purported inventors of the Asserted Patents. Accordingly, ecobee reserves the right to raise these and other challenges as discovery progresses on these issues.

positions that Ollnova may take in this case or in any related litigation involving one or more Asserted Patents, including without limitation *Ollnova Tech. Ltd. v. Google LLC*, 6:2022-cv-00246-ADA (W.D. Tex.), *Ollnova Tech. Ltd. v. Emerson Electric Co. et al.*, 6:2022-cv-00358-ADA (W.D. Tex.), and *Ollnova Tech. Ltd. v. Resideo Technologies, Inc.*, 6:2022-cv-00390-ADA (W.D. Tex.) and *Ollnova Tech. Ltd. v. Carrier Global Corp.*, 9:2022-cv-80388 (S.D. Fla.) (“Related Litigations”); and/or (ii) in response to any attempt by Ollnova to alter its Infringement Contentions in any way.

These Invalidity Contentions are not intended to be, and are not, an admission that the Asserted Claims are infringed, that any particular feature or aspect of the Accused Products practice any elements of the Asserted Claims, or that any of Ollnova’s proposed or implied constructions are correct. ecobee denies that it infringes any claim of the Asserted Patents. ecobee does not agree with, and does not adopt, the apparent constructions adopted by Ollnova in its Infringement Contentions. Further, ecobee notes that Ollnova’s Infringement Contentions are vague, do not comply with the requirements set forth in the Patent Rules, and fail to provide sufficient detail concerning Ollnova’s infringement theories to determine what Ollnova contends to be infringing functionality or how any product or service offered by ecobee could satisfy any particular claim or claim limitation. Put another way, ecobee attempted as best it could to understand Ollnova’s infringement theories and rely on this understanding in setting forth these Invalidity Contentions. But because Ollnova’s Infringement Contentions are so vague and incomplete, Defendants are not entirely sure how Ollnova is interpreting the claims, nor is ecobee entirely sure what Ollnova’s infringement theories are, which may have impacted ecobee’s search for prior art and interpretation of any art located. Any use of or reference to the apparent constructions adopted by Ollnova in its Infringement Contentions, including in the

accompanying charts, is made solely to demonstrate that even under Ollnova's improper understanding of the Asserted Claims, the Asserted Claims are invalid. Such arguments are made in the alternative, and ecobee expressly reserves the right to assert different claim constructions from those apparently adopted by Ollnova in its Infringement Contentions, including with respect to claim construction and noninfringement. To the extent that any prior art reference identified by ecobee contains a claim element that is the same as or similar to an element in an Accused Product, based on a claim construction inferred from Ollnova's Infringement Contentions, inclusion of that reference in ecobee's Invalidity Contentions shall not be deemed a waiver by ecobee of any claim construction or non-infringement position. ecobee expressly reserves the right to contest any claim constructions asserted by Ollnova and expressly reserves all non-infringement arguments. ecobee further expressly reserves the right to take positions with respect to future claim construction or non-infringement issues that are inconsistent with, or even contradictory to, the claim construction or non-infringement positions expressed or implied in these Invalidity Contentions. ecobee's compliance with the current schedule should not be viewed as a waiver of any rights with respect to Ollnova's Infringement Contentions.

Depending on positions that Ollnova or its expert witness(es) may take concerning claim interpretation, infringement, and/or invalidity issues, different ones of the charted prior art references in ecobee's Claim Charts, or otherwise identified herein, may be of greater or lesser relevance and different combinations of these references may be implicated. Given this uncertainty, the charts may reflect alternative applications of the prior art against the Asserted Claims. Nothing stated herein shall be construed as an admission or a waiver of any particular construction of any claim term. ecobee also reserves all of its rights to challenge any of the claim

terms herein under 35 U.S.C. § 112, including by arguing that they are indefinite, not supported by the written description, and/or not enabled. Accordingly, nothing stated herein shall be construed as a waiver of any argument available under 35 U.S.C. § 112. To the extent that accompanying charts identify claim elements present in the prior art, such identification is made only to the extent that such claim elements can be understood, and/or based on Ollnova's apparent interpretation of such claim elements in its Infringement Contentions. ecobee also expressly incorporates herein its Subject Matter Eligibility Contentions served on July 27, 2022, and all briefing and exhibits associated with ecobee's Renewed Motion to Dismiss Pursuant to Fed. R. Civ. P. 12(b)(6) (Dkt. 25).

To the extent that Ollnova attempts to assert that any prior art cited herein (included any reference or product prior art) does not qualify as prior art, including without limitation based on the public use, sale or availability of such prior art, ecobee expressly reserves the right to introduce new and/or additional evidence in rebuttal to such arguments to demonstrate that any such prior art does qualify as prior art.

ecobee further reserves the right to amend these contentions under the full extent granted by this Court's local patent rules.

II. Patent Local Rule 3-3(a): Identification of Prior Art

ecobee contends that the following prior art references—including those described and charted in Exhibits A-1 through A-10 (concerning the '282 Asserted Claims), B-1 through B-9 (concerning the '887 Asserted Claims), C-1 through C-7 (concerning the '495 Asserted Claims), and D-1 through D-8 (concerning the '371 Asserted Claims) (collectively, "Invalidity Contentions Exhibits")—invalidate, either alone or in combination with the knowledge of a person of ordinary skill in the art ("POSITA") and/or one or more references cited therein and/or below, one or more of the Asserted Claims. The references cited in the attached claim charts may

disclose the limitations of the Asserted Claims expressly and/or inherently. In these Invalidity Contentions, including the exhibits, any citation to a printed publication or other reference describing a prior art system should also be construed to include a reference to the prior art system itself. Each listed document or item became prior art at least as early as the dates set forth herein and in the accompanying charts.

The references discussed in the claim charts identified above or elsewhere may disclose the elements of the Asserted Claims explicitly and/or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. The claim charts identified above or elsewhere cite to particular teachings and disclosures of the prior art applied to features of the Asserted Claims. However, a POSITA may view an item of prior art generally in the context of other publications, literature, products, and understanding of those skilled in the art. Accordingly, the cited portions are only examples, and ecobee reserves the right to rely on uncited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context, in response to any characterization of the prior art by Ollnova, including in response to these Invalidity Contentions, and as additional evidence that a claim limitation is known or disclosed. Citations to figures are inclusive of all discussion of those figures, and citations to discussion of figures are inclusive of those figures. ecobee reserves the right to rely on information generally known to those skilled in the art and/or common sense as well as additional publications, materials, and testimony that are not yet currently identified for purposes other than as prior art, including but not limited to background, state of the art in the relevant time frame, level of ordinary skill in the art, and motivation to combine.

Moreover, the suggested obviousness combinations are in the alternative to ecobee's

contentions regarding anticipation. These obviousness combinations should not be construed to suggest that any reference included in any combination is not anticipatory in its own right.

ecobee further identifies the inventor admissions concerning the scope of the prior art relevant to the Asserted Patents found in, inter alia: the specifications and figures of the Asserted Patents; the patent prosecution histories for the Asserted Patents and related patents, patent applications, and/or post-grant proceedings, and any deposition testimony of the named inventors on the Asserted Patents. All of this information is deemed part of the common knowledge known to a POSITA before the alleged inventions claimed in the Asserted Patents (the “Admitted Prior Art”). ecobee further identifies statements concerning the nature or scope of the prior art and/or the Asserted Patents put forth in the papers and any evidence submitted by Ollnova in this or any related action, including without limitation in response to ecobee’s Renewed Motion to Dismiss.

ecobee expressly incorporates by reference as if fully set forth herein any Invalidity Contentions or statements, including any references cited therein, from any of the defendants of any of the Related Litigations. Ollnova has not produced any such Invalidity Contentions to date, despite such contentions being relevant to this litigation and responsive to at least Interrogatory No. 7, but to the extent any such Invalidity Contentions have been served or will be served on Ollnova, they are expressly incorporated herein. ecobee expressly incorporates and identifies the disclosures of the Asserted Patents concerning prior art and the generic and/or conventional nature of any claim element, every reference cited by the applicant or the examiner or otherwise identified during prosecution of the applications leading to the Asserted Patents, as well as the grounds of rejections set forth therein. ecobee incorporates by reference the prosecution history file histories of the Asserted Patents in full and any invalidity arguments and references cited during any proceeding or action related to any of the Asserted Patents. ecobee

further expressly incorporates by reference as if fully set forth herein any and all grounds for invalidity set forth in any petition filed with the USPTO challenging the validity of any Asserted Claim, including without limitation any grounds set forth in any petition for *inter partes* review and/or request for reexamination, and all exhibits thereto.

A. Patent References

ecobee identifies below the patent references presently known to it that anticipate and/or render obvious the Asserted Claims. ecobee incorporates by reference all prior art references cited in the patents listed herein and/or their file histories, as well as all references incorporated by reference into the references disclosed below and in the accompanying charts. ecobee reserves the right to rely upon foreign counterparts of the references identified in these Invalidity Contentions, U.S. counterparts of foreign patents and foreign patent applications identified in these Invalidity Contentions, U.S. and foreign patents and patent applications corresponding to articles and publications identified in these Invalidity Contentions, issued patents corresponding to published patent applications identified in these Invalidity Contentions, published patent applications corresponding to issued patents identified in these Invalidity Contentions, and any systems, products, or prior inventions related to any of the references identified in these Invalidity Contentions.

The following patents and patent application publications, in addition to those identified and cited in the claim chart exhibits served herewith, are prior art to the Asserted Claims of one or more Asserted Patents under at least one or more of 35 U.S.C. §§ 102(a), (b), (e), (f), (g), and/or 103.

Reference No.	Filing Date	Issue/Pub. Date	Title
U.S. Patent No. 5,390,206	10/1/1991	2/14/1995	Wireless communication system for air distribution system

Reference No.	Filing Date	Issue/Pub. Date	Title
U.S. Patent No. 5,485,953	1/26/1995	1/23/1996	Method and Apparatus for Controlling the Circulation of Heat Transfer Fluid for Thermal Conditioning Systems for Spaces
U.S. Patent No. 5,595,342	5/24/1994	1/21/1997	Control system
U.S. Patent No. 5,715,177	6/28/1996	2/3/1998	Terminal Sensing Device for a Disaster Prevention Monitoring System
U.S. Patent No. 5,764,146	10/25/1996	6/9/1998	Multifunction Occupancy Sensor
U.S. Patent No. 5,784,004	6/20/1995	7/21/1998	Apparatuses and systems for reducing power consumption in remote sensing applications
U.S. Patent No. 5,898,369	1/18/1996	4/27/1999	Communicating Hazardous Condition Detector
U.S. Patent No. 6,029,092	11/21/1996	2/22/2000	System and Method for Providing Modular Control and For Managing Energy Consumption
U.S. Patent No. 6,119,125	4/3/1998	9/12/2000	Software components for a building Automation system based on a standard object superclass
U.S. Patent No. 6,167,316	4/3/1998	12/26/2000	Distributed object-oriented building automation system with reliable asynchronous communication
U.S. Patent No. 6,208,905	12/20/1991	3/27/2001	System and method for controlling conditions in a space
U.S. Patent No. 6,414,968	10/30/1998	7/2/2002	Transmission and detection of data in a dual channel transceiver
U.S. Patent No. 6,437,692	11/12/1999	8/20/2002	System and method for monitoring and controlling remote device
U.S. Patent No. 6,493,739	3/2/1999	12/10/2002	Task scheduling in an event driven environment
U.S. Patent No. 6,580,950	4/28/2000	6/17/2003	Internet based home communications system
U.S. Patent No. 6,619,555	2/13/2002	9/16/2003	Thermostat system communicating with a remote correspondent for receiving and displaying diverse information
U.S. Patent No. 6,697,757	9/19/2001	2/24/2004	Local Network Based Multiple Sensor Device with Electrical Load Control Means and with Temperature Sensor and Heat Detector that is Exposed to Ambient Air by Diffusion
U.S. Patent No. 6,717,513	8/19/2002	4/6/2004	Electronic Message Delivery System Utilizable In The Monitoring And Control Of Remote Equipment And Method Of

Reference No.	Filing Date	Issue/Pub. Date	Title
			Same
U.S. Patent No. 6,727,816	5/13/1999	4/27/2004	Wireless system with variable learned-in transmit power
U.S. Patent No. 6,741,174	10/30/2001	5/25/2004	Environment and hazard condition monitoring system
U.S. Patent No. 6,741,571	10/30/2001	5/25/2004	Method and apparatus for using unintended radio frequency propagation in a network
U.S. Patent No. 6,792,319	10/19/2000	9/14/2004	Home Automation System and Method
U.S. Patent No. 6,868,682	1/16/2003	3/22/2005	Agent Based Control Method and System for Energy Management
U.S. Patent No. 6,891,838	11/1/2000	5/10/2005	System and method for monitoring and controlling residential devices
U.S. Patent No. 6,915,211	4/4/2003	7/5/2005	GIS Based Real-Time Monitoring and Reporting System
U.S. Patent No. 6,922,558	3/6/1998	7/26/2005	Integrated building control and information system with wireless networking
U.S. Patent No. 6,941,193	2/12/2003	9/6/2005	Sensor System for Measuring and Monitoring Indoor Air Quality
U.S. Patent No. 6,950,725	12/7/2001	9/27/2005	Home Latch-Key Web Based Automation System
U.S. Patent No. 6,990,394	6/13/2003	1/24/2006	Lighting Control System and Method
U.S. Patent No. 7,012,524	8/12/2003	3/14/2006	Anti-intruder security system with sensor network and actuator network
U.S. Patent No. 7,012,534	5/16/2005	3/14/2006	Infant monitoring system and method
U.S. Patent No. 7,039,358	11/16/2000	5/2/2006	Coexistence techniques in wireless networks
U.S. Patent No. 7,042,352	5/27/2004	5/9/2006	Wireless repeater for sensor system
U.S. Patent No. 7,042,353	4/12/2004	5/9/2006	Cordless telephone system
U.S. Patent No. 7,053,767	5/6/2002	5/30/2006	System and method for monitoring and controlling remote devices
U.S. Patent No. 7,058,477	11/23/2004	6/6/2006	Thermostat system with remote data averaging
U.S. Patent No. 7,102,505	5/27/2004	9/5/2006	Wireless sensor system
U.S. Patent No. 7,120,560	4/29/2005	10/10/2006	Lamp monitoring and control system and method
U.S. Patent	4/22/2004	1/2/2007	Stigmergic sensor security system

Reference No.	Filing Date	Issue/Pub. Date	Title
No. 7,158,021			
U.S. Patent No. 7,183,899	3/15/2004	2/27/2007	Remotely Monitored and Controlled Building Automation System
U.S. Patent No. 7,251,570	5/4/2005	7/31/2007	Data Integrity in a Mesh Network
U.S. Patent No. 7,274,973	12/7/2004	9/25/2007	HVAC/R Monitoring Apparatus and Method
U.S. Patent No. 7,283,048	12/29/2005	10/16/2007	Multi-level meshed security network
U.S. Patent No. 7,287,393	5/18/2004	10/30/2007	Central control system of air conditioners and method for operating the same
U.S. Patent No. 7,295,128	4/29/2005	11/13/2007	Smoke Detection Methods, Devices, and Systems
U.S. Patent No. 7,319,853	10/15/2003	1/15/2008	Home System Including A Portable Fob Having A Display
U.S. Patent No. 7,324,824	12/8/2004	1/29/2008	Wireless network monitoring system
U.S. Patent No. 7,339,957	10/24/2003	3/4/2008	Scheduled transmission in a wireless sensor system
U.S. Patent No. 7,343,136	6/10/2004	3/11/2008	Apparatus for detecting environmental conditions for a structure or article
U.S. Patent No. 7,382,271	9/29/2004	6/3/2008	Automated position detection for wireless building automation devices
U.S. Patent No. 7,433,740	12/16/2005	10/7/2008	CAN communication for building automation systems
U.S. Patent No. 7,436,789	7/27/2004	10/14/2008	Ad Hoc wireless node and network
U.S. Patent No. 7,436,797	6/17/2005	10/14/2008	Wireless architecture and support for process control systems
U.S. Patent No. 7,511,614	12/29/2005	3/31/2009	Portable telephone in a security network
U.S. Patent No. 7,446,647	3/6/2006	11/4/2008	State validation using bi-directional wireless link
U.S. Patent No. 7,460,865	06/18/2003	12/02/2008	Self-configuring communication networks for use with process control systems
U.S. Patent No. 7,561,057	8/31/2005	7/14/2009	Method and apparatus for detecting severity of water leaks
U.S. Patent No. 7,650,323	10/7/2008	1/19/2010	CAN Communication For Building Automation System
U.S. Patent No. 7,650,425	08/09/2001	1/19/2010	System and method for controlling communication between a host computer and communication devices associated with remote devices in an automated monitoring system

Reference No.	Filing Date	Issue/Pub. Date	Title
U.S. Patent No. 7,664,573	9/29/2004	2/16/2010	Integrated Building Environment Data System
U.S. Patent No. 7,778,600	10/6/2006	8/17/2010	Apparatus and method to provide multiple wireless communication paths to and from remotely located equipment
U.S. Patent No. 7,780,092	8/30/2006	8/24/2010	Application of Microsystems for Real Time IEQ Control
U.S. Patent No. 7,792,126	5/19/2006	9/7/2010	Distributed Monitoring and Control System
U.S. Patent No. 7,814,582	6/29/2005	10/19/2010	System and method for measuring and monitoring overflow or wetness conditions in a washroom
U.S. Patent No. 7,855,081	10/15/2007	12/21/2010	Methods of detecting RF interference in breath ethanol testing
U.S. Patent No. 7,870,080	10/23/2007	1/11/2011	Multi-Utility Energy Control And Facility Automation Control System With Dashboard Having A Plurality Of Interface Gateways
U.S. Patent No. 7,904,209	10/23/2007	1/11/2011	Open web services-based indoor climate control system
U.S. Patent No. 7,920,841	10/12/2007	4/5/2011	Alarm system with two-way voice
U.S. Patent No. 7,933,945	6/27/2002	4/26/2011	Method, system, and computer program product for managing controlled residential or non-residential environments
U.S. Patent No. 7,956,719	6/22/2006	6/7/2011	Building control system communication system timing measurement arrangement and method
U.S. Patent No. 7,963,454	8/27/2007	6/21/2011	Remote HVAC Control with Remote Sensor Wiring Diagram Generation
U.S. Patent No. 8,020,777	1/29/2007	9/20/2011	System and method for budgeted zone heating and cooling
U.S. Patent No. 8,023,440	10/31/2006	9/20/2011	Binding wireless devices in a building automation system
U.S. Patent No. 8,131,399	1/28/2003	3/6/2012	Building control system with building level network and room network using different wireless communication scheme
U.S. Patent No. 8,164,440	4/22/2008	4/24/2012	Methods for emergency communication within a fire safety system
U.S. Patent No. 8,196,185	8/27/2007	6/5/2012	Remote HVAC control with a customizable overview display
U.S. Patent No. 8,199,005	11/6/2007	6/12/2012	System and Methods for Using A Wireless Sensor In Conjunction With A Host Controller

Reference No.	Filing Date	Issue/Pub. Date	Title
U.S. Patent No. 8,249,579	8/28/2007	8/21/2012	Reprogramming Nodes in a Wireless Automation System
U.S. Patent No. 8,359,351	9/1/2010	1/22/2013	Network-accessible control of one or more media devices
U.S. Patent No. 8,538,589	2/3/2012	9/17/2013	Building System with Reduced Wiring Requirements and Apparatus for Use Therein
U.S. Patent No. 8,615,374	6/9/2006	12/24/2013	Modular, configurable, intelligent sensor system
U.S. Patent No. 8,644,792	4/22/2008	2/4/2014	Emergency Display for Emergency Personnel
U.S. Patent No. 8,719,327	9/6/2007	5/6/2014	Wireless communication of process measurements
U.S. Patent No. 8,981,950	11/11/2014	3/17/2015	Sensor Device Measurements Adaptive to HVAC Activity
U.S. Patent No. 8,984,500	6/14/2004	3/17/2015	Programming a computing node connected to a sensor and an actuator
U.S. Patent No. 9,030,315	8/28/2007	5/12/2015	Binding methods and devices in a building automation system
U.S. Patent No. 10,156,831	12/18/2012	12/18/2018	Automation System with Mobile Interface
U.S. Patent No. 10,324,478	10/1/2014	6/18/2019	Wireless node auto-reset function
U.S. Patent No. 10,379,504	4/3/2015	8/13/2019	Method and Apparatus to Optimize Power to Maximize Performance of Mesh Sensors and Control Networks
U.S. Patent No. 10,558,229	6/26/2017	2/11/2020	Method And Apparatus For Monitoring Refrigeration-Cycle
U.S. Patent No. 11,182,060	5/23/2018	11/23/2021	Networked touchscreen with integrated interfaces
U.S. Patent No. 11,308,441	11/19/2020	4/19/2022	Method and system for tracking and monitoring assets
U.S. Patent Application Pub. No. 2002/0125998	5/6/2002	9/12/2002	System and method for monitoring and controlling remote devices
U.S. Patent Application Pub. No.	3/7/2002	5/22/2003	Interconnecting Device

Reference No.	Filing Date	Issue/Pub. Date	Title
2003/0096590			
U.S. Patent Application Pub. No. 2003/0137968	10/20/2002	7/24/2003	Monitoring and tracking of assets by utilizing wireless communications
U.S. Patent Application Pub. No. 2003/0151513	11/21/2002	8/14/2003	Self-organizing hierarchical wireless network for surveillance and control
U.S. Patent Application Pub. No. 2003/0152041	11/21/2002	8/14/2003	Protocol for reliable, self-organizing, low-power wireless network for security and building automation systems
U.S. Patent Application Pub. No. 2003/0174070	3/13/2003	9/18/2003	Wireless supervisory control and data acquisition
U.S. Patent Application Pub. No. 2004/0008651	1/28/2003	1/15/2004	Building system with reduced wiring requirements and apparatus for use therein
U.S. Patent Application Pub. No. 2004/0088082	1/28/2003	5/6/2004	Building control system and fume hood system for use therein having reduced wiring requirements
U.S. Patent Application Pub. No. 2004/0100394	10/24/2003	5/27/2004	Distributed environmental control in a wireless sensor system
U.S. Patent Application Pub. No. 2004/0122930	6/13/2003	6/24/2004	Lighting Control System and Method
U.S. Patent Application Pub. No. 2004/0144849	9/26/2003	7/29/2004	Building control system using integrated MEMS devices
U.S. Patent Application Pub. No. 2004/0204793	12/9/2003	10/14/2004	Integrated Controlled Multi-Air Conditioner System
U.S. Patent Application Pub. No.	6/10/2004	1/27/2005	Apparatus for detecting environmental conditions for a structure or article

Reference No.	Filing Date	Issue/Pub. Date	Title
2005/0017873			
U.S. Patent Application Pub. No. 2005/0078672	7/27/2004	4/14/2005	Ad Hoc wireless node and network
U.S. Patent Application Pub. No. 2005/0122231	11/8/2004	6/9/2005	Power efficient wireless system for sensor network
U.S. Patent Application Pub. No. 2005/0125083	11/9/2004	6/9/2005	Automation Apparatus and Methods Improved Automation Apparatus And Methods
U.S. Patent Application Pub. No. 2005/0200474	3/15/2004	9/15/2005	Remotely monitored and controlled building automation system
U.S. Patent Application Pub. No. 2005/0275530	5/27/2004	12/15/2005	Wireless Sensor System
U.S. Patent Application Pub. No. 2006/0028997	8/9/2004	2/9/2006	Wireless building control architecture
U.S. Patent Application Pub. No. 2006/0152335	3/6/2006	7/13/2006	State validation using bi-directional wireless link
U.S. Patent Application Pub. No. 2006/0264221	8/20/2004	11/23/2006	Information Processor and Processing Method, Information Processing System, Information Processing Program, Recording Medium, and Vehicle
U.S. Patent Application Pub. No. 2007/0088462	7/21/2004	4/19/2007	Garden-Controlling System
U.S. Patent Application Pub. No. 2007/0241878	6/22/2006	10/18/2007	Technician communications for automated building protection systems
U.S. Patent Application Pub. No.	8/28/2007	3/6/2008	Binding Method and Devices in a Building Automation System

Reference No.	Filing Date	Issue/Pub. Date	Title
2008/0056722			
U.S. Patent Application Pub. No. 2008/0125057	10/31/2006	5/29/2008	Binding wireless devices in a building automation system
U.S. Patent Application Pub. No. 2008/0182506	1/29/2007	7/31/2008	Method for controlling multiple indoor air quality parameters
U.S. Patent Application Pub. No. 2008/0258633	2/19/2008	10/23/2008	Building Optimization System and Lighting Switch
U.S. Patent Application Pub. No. 2009/0027196	10/24/2007	1/29/2009	System and Method For Premises Monitoring And Control Using Self-Learning Detection Devices
U.S. Patent Application Pub. No. 2009/0083416	6/9/2008	3/26/2009	Methods to verify wireless node placement for reliable communication in wireless sensor control networks
U.S. Patent Application Pub. No. 2009/0140062	11/25/2008	6/4/2009	HVAC controller that selectively replaces operating information on a display with system status information
U.S. Patent Application Pub. No. 2011/0251726	5/3/2007	10/13/2011	Method of Optimising Energy Consumption
Int'l Application Pub. No. WO 99/017477	9/30/1998	4/8/1999	Multi tier wireless communication system
Int'l Application Pub. No. WO 00/028776	11/6/1999	5/18/2000	Method for operating transmitting and receiving devices in a control system for one or more rooms in a building
Int'l App. No. PCT/US00/063 12 (Int'l Pub. No. WO 00/54237)	03/10/2000	09/14/2000	Systems and methods for network based sensing and distributed sensor, data and memory management
Int'l Application	5/15/2000	11/23/2000	Wireless control network with scheduled time slots

Reference No.	Filing Date	Issue/Pub. Date	Title
Pub. No. WO 00/070572			
Int'l Application Pub. No. WO 00/070573	5/15/2000	11/23/2000	State validation using bi-directional wireless link
Int'l Application Pub. No. WO 01/093220	5/29/2001	12/6/2001	Modular communication and control system and method
Japanese Application Pub. No. JPH1186159	9/4/1997	3/30/1999	Fire Alarm Facility
Japanese Application Pub. No. JP3855392	9/19/1997	12/6/2006	Wireless housing equipment system

B. Publications

ecobee identifies below the publications presently known to it that anticipate and/or render obvious the Asserted Claims. ecobee incorporates by reference all prior art references cited in the publications listed herein. To the extent the following publications disclose and describe particular products that were publicly known and/or in public use prior to the priority date of the Asserted Patents, in addition to each publication itself serving as a prior art reference under 35 U.S.C. § 102, the various products described in the publications may also serve as grounds for invalidity under 35 U.S.C. § 102 because they were in public use, in which case it would have been obvious to a person of ordinary skill in the art to combine the actual systems in public use with the published documents describing those systems because the documents described the systems in public use and refer to them throughout.

The following publications, in addition to those identified and cited in the claim chart exhibits served herewith, are prior art to the Asserted Claims of one or more Asserted Patents

under at least one or more of 35 U.S.C. §§ 102(a), (b), (e), (f), (g), and/or 103.

Publication Date	Title
Aug. 4, 2004	Dust Networks: Committed to Solutions That Work (Our Company, Dust Technology and Applications); http://www.dust-inc.com/company/main.html ; (Aug. 4, 2004)
Oct. 2003	802.15.4 IEEE Standard for Information Technology Telecommunications and Information Exchange Between Systems—Local and Metropolitan Area Networks—Specific Requirements; Part 15.4 Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Low-Rate Wireless Personal Area Networks (LR-WPANs); IEEE Computer Society; Published by the Institute of Electrical and Electronics Engineers, Inc.—NY, NY on Oct. 1, 2003
June 1991	James Y. Kao, Direct Digital Control Based Building Automation System Design Criteria (June 1991)
Apr. 2005	M.R. Brambley et al., Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways (April 2005)
June 2005	Wolfgang Kastner et al., Communication Systems for Building Automation and Control (June 2005)
May 2007	Fredrik Osterlind, Integrating Building Automation Systems and Wireless Sensor Networks (May 2007)
2005	Dimitrios Hristu-Varsakelis et al., Handbook of Networked and Embedded Control Systems (2005)
Apr. 2003	GE Interlogix, Simon® Security System User Guide (April 2003)
Feb. 2003	GE Interlogix, Concord® User Instructions (April 2003)
May 6, 2004	Gary Legg, Zigbee: Wireless Technology for Low-Power Sensor Networks (EETimes), available at https://www.eetimes.com/zigbee-wireless-technology-for-low-power-sensor-networks/
Sept. 1, 2005	M. Kinter-Meyer, et al., Opportunities of Wireless Sensors and Controls for Building Operation (September 1, 2005)
Aug. 30, 2002	M. Kinter-Meyer, et al., Wireless Sensors: Technology and Cost-Savings for Commercial Buildings (August, 30 2002)
May 2007	Fredrik Österlind et al., Integrating Building Automation Systems and Wireless Sensor Networks, SICS Technical Report T2007:04 (May 2007)
July 2000	Harry Newton, Newton's Telecom Dictionary (16 th ed., July 2000)
2000	Annabel Z. Dodd, The Essential Guide to Telecommunications (2d ed. 2000)
April 2003	GE Interlogix, Simon® Security System, User Guide, 466-1871 Rev H (April 2003)
May 2002	Simon 3 Security System Control Panel, Installation Instructions, 466-1873 (May 2002)
2002	GE Interlogix, Dialog RF Electronic Thermostat, Product Information, 466-1932 Rev A (©2002)
Nov. 2002	GE Interlogix, Dialog RF Electronic Thermostat, Installation Instructions, 466-1931 Rev. B (Nov. 2002)
Mar. 23, 2004	Press Release, GE Security's Simon/Alarm.com Wins TechHome Mark of Excellence Award (March 23, 2004)
June 21, 2004	GE Infrastructure Security, Family Overview – Advent, Allegro, Concord, NetworX, Simon, http://www.geindustrial.com/cwc/products/ge-interlogix (June 21, 2004)
March 6,	GE Infrastructure Security, Intrusion Control Panel Version 3, Self-Contained Talking

Publication Date	Title
2005	System, 24-Zone – Simon 3, http://www.geindustrial.com/cwc/products/ge-interlogix (March 6, 2005)
May 28, 2004	GE Infrastructure Security, Wireless Touchpad 2-Way RF – NetworX, http://www.geindustrial.com/cwc/products/ge-interlogix (May 28, 2004)
May 7, 2004	GE Infrastructure Security, Wireless Keypad -- Simon - Simon, http://www.geindustrial.com/cwc/products/ge-interlogix (May 7, 2004)
April 2005	GE Security, Wireless Controls & Sensors, Dealer Price List, Column 4 (April 2005)
May 2007	HAI Omnistat, Electronic Communicating Thermostat, Owner's Manual, RC-80B/RC-80Z, Single State Heat/Cool (May 2007)
Jan. 2004	Alarm.com Overview (January 2004)
	FCC Submissions for B4Z-787E-SIMON, <i>available at</i> https://apps.fcc.gov/oetcf/eas/reports/ViewExhibitReport.cfm?mode=Exhibits&RequestTimeout=500&calledFromFrame=Y&application_id=AcXWw2lDeGAiAPnWG cU4cQ%3D%3D&fcc_id=B4Z-787E-SIMON
2008	ecobee SMART Thermostat Installation Manual (©2008), ecobee-Ollnova-0006617-6630
2008	ecobee SMART Thermostat User Manual (©2008), ecobee-Ollnova-0006631-6644
2008	ecobee SMART Thermostat Quick Start Guide (©2008), ecobee-Ollnova-0006645-6646
Sept. 30, 2008	Avanig Home Automation Platform Release 1.0 Product Requirements Document (Version 1.3, Sept. 30, 2008), ecobee-Ollnova-0006975-7024
Dec. 8, 2008	Mark Skaer, Smart Products for Smart Contractors (Dec. 8, 2008), https://web.archive.org/web/20081209052138/http://www.achrnews.com/CDA/Articles/Feature_Article/BNP_GUID_9-5-2006_A_10000000000000483191
Jan. 30, 2009	R. Miller, Ecobee's eco-saving, WiFi-enabled Smart Thermostat now available for order (Jan. 30, 2009), https://www.engadget.com/2009-01-30-ecobees-eco-saving-wifi-enabled-smart-thermostat-now-available.html
Nov. 13, 2008	PR Newswire, ecobee, Maker of New Smart Thermostat, Opens U.S. Sales Offices (Nov. 13, 2008), https://web.archive.org/web/20090204085009/http://news.prnewswire.com/ViewContent.aspx?ACCT=109&STORY=/www/story/11-13-2008/0004924924&EDATE
Nov. 2008	ecobee.com website (Nov. 2008), https://web.archive.org/web/20081120134458/http://www.ecobee.com/
Jan. 2009	ecobee.com website (Jan. 2009), https://web.archive.org/web/20090121191534/http://ecobee.com/
Feb. 2003	GE Interlogix, Concord User Instructions, 466-1513-01 Rev D (Feb. 2003)
Aug. 2003	GE Interlogix, Concord User Instructions, 466-1513-01 Rev E (Aug. 2003)
Aug. 2003	GE Interlogix, Concord Security System (Software Version 3.1), Installation Instructions, 466-1512-01 Rev F (Aug. 2003)
2002	GE Interlogix, Dialog RF Electronic Thermostat, Product Information, 466-1932 Rev A (©2002)
Nov. 1999	NISTIR 6392, <i>GSA Guide to Specifying Interoperable Building Automation and Control Systems Using ANSI/ASHRAE Standard 135-1995, BACnet</i>

Publication Date	Title
Nov. 2002	Michael Kintner-Meyer, Ph.D. et al., <i>Pros & Cons of Wireless</i> , available at https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.164.699&rep=rep1&type=pdf
Mar. 2004	Weilin Wang et al., <i>The key to reliable ad hoc wireless networking for building automation applications and protocols is an Autonomic mesh network</i> , Available at https://www.automatedbuildings.com/news/mar04/articles/kiyon/kiyon.htm
Jan. 16, 2004	Home Security and Surveillance Systems, Available at https://www.pearsonitcertification.com/articles/article.aspx?p=102618
Sept. 1999	Seppo A. Virtanen, <i>On Communications Protocols and their Characteristics Relevant to Designing Protocol Processing Hardware</i> , TUCS Technical Report No. 305, ISBN 952-12-0533-4
2003	Ivan Howitt et al., <i>IEEE 802.15.4 Low Rate – Wireless Personal Area Network Coexistence Issues</i> , 2003 IEEE Wireless Communications and Networking at 1481-86

* * *

For all of the references listed above, ecobee contends that they qualify as prior art for one or more Asserted Patents as of their earliest relevant Section 102 date, such as their earliest publication or use date. ecobee reserves the right to claim the benefit of prior provisional applications for any of the above identified patent, patent publications, and patent applications.

To the extent the alleged inventions identified in the patents, publications, systems, and other prior art to the Asserted Patents identified in these Invalidity Contentions were conceived by another and diligently reduced to practice before the alleged conception and reduction to practice of the Asserted Claims by the named inventors of those patents, such prior art invalidates the Asserted Patents under 35 U.S.C. § 102(f) and/or (g). In addition, discovery is ongoing and ecobee reserves the right to assert any subsequently discovered items of prior art under 35 U.S.C. § 102(a), (b), (e), or (g), and § 103, located during the course of discovery or further investigation.

III. Patent Local Rule 3-3(b): Whether Each Prior Art Anticipates or Renders Obvious the Asserted Claims

A. Priority

Ollnova's Local Patent Rule 3-1(e) disclosures assert that the asserted claims of the '282 Patent are entitled to a priority date of March 19, 2008. ecobee asserts that the '282 Asserted Claims are entitled to a priority date of March 18, 2009, because Ollnova has failed to demonstrate that the subject matter claimed in the '282 Asserted Claims is fully supported by the provisional application filed on March 19, 2008 (Provisional App. No. 61/037,739). ecobee reserves the right to assert that the '282 patents is not entitled to the priority date identified by Ollnova, or is only entitled to a later priority date, based on any findings as to the priority date of the '282 Asserted Claims by the Court, information learned through discovery, or otherwise.

B. Anticipation

Some or all of the Asserted Claims of the Asserted Patents are invalid as anticipated under 35 U.S.C. § 102 in view of the prior art references identified above and in the Invalidity Contentions Exhibits, which identify specific non-limiting examples of where each limitation of the Asserted Claims can be found in the prior art, either expressly or inherently. As explained above, the cited portions of prior art references identified in the attached claim charts are exemplary only and representative of the content and teaching of the prior art references, and should be understood in the context of the reference as a whole and as they would be understood by a POSITA.

C. Obviousness

Each anticipatory prior art reference, either alone or in combination with other prior art, also renders the Asserted Claims invalid as obvious under 35 U.S.C. § 103. To the extent that Ollnova argues that any limitation is deemed not to be exactly met, either explicitly or

inherently, by an item of prior art listed above and in the Invalidity Contentions Exhibits, then any purported differences are such that the claimed subject matter as a whole would have been obvious to a POSITA, including in view of the other art identified herein. Ollnova has not yet responded to these Invalidity Contentions or made any such arguments, and therefore ecobee expressly reserves the right to argue and demonstrate that any purported differences between the identified prior art and the Asserted Claims would have been obvious to a POSITA, including for reasons beyond any examples of obviousness contained herein and in the claim charts.

In particular, each anticipatory prior art reference on its own renders obvious the claimed alleged inventions and also may be combined with (i) information known to a POSITA at the time of the alleged invention and/or (ii) any of the other anticipatory prior art references. The item of prior art would, therefore, render the relevant claims invalid for obviousness under 35 U.S.C. § 103(a).

In addition, the references identified above render one or more asserted claims of the Asserted Patents obvious when the references are read in combination with each other, and/or when read in view of the state of the art and knowledge of a POSITA. Each and every reference identified is also relevant to the state of the art at the time of the alleged invention. Any of the references disclosed above may be combined to render obvious (and therefore invalid) each of Ollnova's Asserted Claims. ecobee may rely upon all or a subset of the references identified above, including all references addressed in the Invalidity Contentions Exhibits, for purposes of obviousness depending on the Court's claim construction, positions taken by Ollnova during this litigation or in any related litigations (including in response to these or other Invalidity Contentions), and further investigation and discovery. ecobee may rely on combinations with any reference in the Invalidity Contentions Exhibits for each respective Asserted Patent, and any of

the other references disclosed herein with respect to the Asserted Patents, including combinations with any of the patents, publications or systems identified herein as prior art to the Asserted Patents. Combining the references disclosed in herein and in the Invalidity Contentions Exhibits for each respective Asserted Patent would have been obvious, as the references identify and address the same technical issues and suggest similar solutions to those issues. ecobee reserves the right to amend or supplement these Invalidity Contentions to identify additional reasons that combining the references would be obvious to a POSITA, including with expert testimony to be disclosed in accordance with the rules of this Court.

In *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1731 (2007), the Supreme Court clarified and expanded upon the standard for what types of inventions are patentable. *See id.* at 1739 (“the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results”). In particular, *KSR* emphasizes that inventions arising from ordinary innovation, ordinary skill or common sense should not be patentable. *See id.* at 1732, 1738-39, 1742-43, 1746. Because the Asserted Patents simply combine elements well known in the art in a straightforward fashion to achieve a well-known and obvious result and thus yield no more than one skilled in the art would expect from such combinations, the claims of the Asserted Patents are obvious. The Asserted Claims are therefore invalid under 35 U.S.C. § 103 because they do nothing more than combine known techniques and apparatuses according to their known and ordinary uses to yield predictable results.

The Supreme Court further held that “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device,

and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill....” *See id.* at 1740. Moreover, no showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of skill in the art. *See id.* at 1739-41 (rejecting the Federal Circuit’s “rigid” application of the teaching, suggestion, or motivation to combine test, instead espousing an “expansive and flexible” approach). Indeed, the Supreme Court held that a person of ordinary skill in the art is “a person of ordinary creativity, not an automaton” and “in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 1742. Nevertheless, in addition to the information contained elsewhere in these contentions, ecobee hereby identifies motivation and reason to combine the cited art.

Here, one or more combinations of the prior art references identified would have been obvious to one of ordinary skill in the art because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally results.

Under *KSR*, a claim may be obvious based on the following rationales:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known techniques to improve similar devices (methods, or products) in the same way;

- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

See 72 Fed. Reg. 57526.

These rationales apply in rendering obvious the Asserted Claims of the Asserted Patents. Here, the state of the art at the relevant time expressly taught and suggested combining various building automation systems. As a result, one skilled in the art would have known to combine or modify references that described known systems and methods which one of skill in the art would have recognized as offering improvements to solutions at that time. Each of the prior art references identified herein and in the Invalidity Contentions Exhibits describe systems and methods that were known to offer such improvements, and, accordingly, one of skill in the art would have been motivated to combine or modify the references as described herein. Indeed, a person having ordinary skill in the art would have recognized that the prior art disclosed and relied upon in these Invalidity Contentions involve the same or similar technology (i.e., systems, components and methods for implementing building automation systems and/or wireless sensor networks), and that modifying the specific features disclosed in the prior art in the exemplary manner set forth in, e.g., the Invalidity Contentions Exhibits would have been obvious, including in view of known benefits that include, e.g., design and operation efficiency, energy savings, reducing necessary hardware and/or software, home or building design preferences, and design

choice and aesthetics, among other things. No new or materially different hardware components would be necessary to carry out the identified modifications, and the claims do not require any particular software or code to carry out the claim limitations. Thus, carrying out the modifications would have simply been a design choice, one of a finite number of predictable solutions, and would not have required undue experimentation. Therefore, for any limitations not expressly or inherently disclosed by a particular reference, a person having ordinary skill in the art would have found such limitation obvious in view of the reference alone, or in combination with one or more of the other references disclosed herein and/or cited in the Invalidity Contentions Exhibits.

In accordance with Patent L.R. 3-3(b), prior art references rendering the Asserted Claims of the Asserted Patents obvious, alone or in combination with other references, are discussed and listed above and included in the Invalidity Contentions Exhibits where indicated. These exhibits include exemplary claim charts for the Asserted Patents that refer to specific combinations of references, including citations to relevant disclosures in those references, where indicated. ecobee may rely on a combination of an identified primary reference, such as those identified in the Invalidity Contentions Exhibits, and one or more of the secondary references identified those exhibits and/or any references identified herein. To the extent any claim limitations are found to be missing from the primary references, in addition to the references designated for combination with the primary references, described in each exhibit, it would have been obvious to a POSITA to add the missing limitation based on the corresponding disclosure of that limitation in the Invalidity Contentions Exhibits.

The obviousness combinations and rationales set forth herein reflect ecobee's present understanding of the potential scope of the claims that Ollnova appears to be advocating and

should not be seen as ecobee's acquiescence to Ollnova's interpretation of the patent claims. ecobee reserves the right to amend or supplement these contentions regarding anticipation or obviousness of the Asserted Claims, in view of further information from Ollnova, information discovered during discovery, or a claim construction ruling by the Court.

In the Asserted Patents, the Applicants make admissions as to what was known at the relevant time. Defendants specifically rely on and identify this admitted prior art, including without limitation the Applicants' admissions concerning the state of the art, existing apparatuses, systems and methods at the time of the Asserted Patents, and the generic and/or conventional nature of claim elements set forth in the Asserted Patents and/or described in ecobee's Subject Matter Eligibility Contentions served on July 27, 2022, and all briefing and exhibits associated with ecobee's Renewed Motion to Dismiss Pursuant to Fed. R. Civ. P. 12(b)(6) (Dkt. 25), which are hereby incorporated by reference in their entirety.

In the prosecution histories for the Asserted Patents, the Applicants make arguments and admissions as to what the prior art discloses, and what is allegedly novel in the Asserted Patents. The Examiner also makes arguments concerning what the prior art discloses, and what is allegedly novel in the Asserted Patents, including in the notices of allowance for each respective Asserted Patent prosecution history. The prosecution histories for each Asserted Patent are hereby incorporated in their entirety, including these arguments and admissions, which further demonstrate that the alleged inventions claimed in the Asserted Claims would have been obvious to a POSITA, including in view of the prior art cited herein.

For example, during prosecution of the '282 patent, the Applicants argued that the claimed subject matter was novel because the prior art identified by the Examiner as anticipating ("Petite") did not disclose the recited "multi-sensor package." *See, e.g.*, 4/20/2012 Response to

Final Office Action. Based on this argument, the claims were allowed. *See* 5/3/2012 Notice of Allowance. However, use of a “multi-sensor package,” including in building automation systems, was well known at the time and would have been obvious to a POSITA. *See, e.g.*, claim limitations 1(a), 7(a), 13(a) and 20(a) in Exhibit Nos. A-3 (Ahmed), A-4 (Liu), A-5 (McFarland), A-7 (Kates) and A-10 (Hitt).

During prosecution of the '887 patent, the Applicants argued that the claimed subject matter was novel due to the incorporation of previously dependent claims into the independent claim 1. *See, e.g.*, 1/27/2010 Response to Final Office Action. Based on the inclusion of the claim language “wherein the transceiver is configured to transmit a most recent reading of the indicator stored in the memory during a period of a transmission interval in response to detecting a change in the sensed condition outside a predetermined range and wherein transmission of the most recent reading of the indicator stored in the memory during the period of the transmission interval is suspended in response to detecting a change in the sensed condition within the predetermined range,” the claims were allowed. *See, e.g.*, 2/22/2010 Notice of Allowance. However, the use of selective transmissions of a reading of an indicator in response to the detection of a change in the sensed condition outside a predetermined range was well known at the time and would have been obvious to a POSITA. *See, e.g.*, claim limitation 1(e) in Exhibit Nos. B-1 (Machida), B-2 (Kates), B-5 (Lareau), and B-7 (Behnke).

During prosecution of the '495 patent, the Applicants argued that the claimed subject matter was novel because the prior art identified by the Examiner as rendering the claims obvious (“Rhoades” and “Hitt”) did not disclose “a first wireless network and a second wireless network each of which utilizes a different communications protocol.” *See, e.g.*, 1/25/2010 Response to Final Office Action. Based on this argument, the claims were allowed. *See*

3/30/2010 Examiner Interview Summary Record; 8/26/2010 Notice of Allowance. However, use of a both a first and second wireless network, each of which utilizes a different communications protocol, including in building automation control systems, was well known at the time and would have been obvious to a POSITA. *See, e.g.*, claim limitations 1(a), (b), and (c) in Exhibit Nos. C-1 (Ahmed), C-2 (Pasternak), C-3 (Mesarina), C-4 (Hermann), and C-6 (Nixon).

During prosecution of the '371 patent, the Applicants argued that the claimed subject matter was novel because the prior art identified by the Examiner as rendering the claims obvious ("Gloudeman" and "Romans") did not disclose "generating a change-of-value update that includes a plurality of change-of-value messages received from a plurality of devices." *See, e.g.*, 5/10/2012 Response to Final Office Action. Based on this argument, the claims were allowed. *See* 5/24/2012 Notice of Allowance. However, the use of change-of-value updates that include a plurality of change-of-value messages that are received from a plurality of devices, including in building automation systems, was well known at the time and would have been obvious to a POSITA. *See, e.g.*, claim limitations 1(e), 8(b), 13(d), and 17(c) in Exhibit Nos. D-1 through D-8.

A POSITA would have recognized that there were no significant impediments (technological or otherwise) to combining elements and features from different references identified herein. Indeed, the prior art references evidence a mixing-and-matching of the same basic features into different combinations. The above discussion regarding admitted prior art apply equally to all Asserted Patents. Accordingly, it would be obvious to combine the conventional components of building automation systems as taught by the references identified above to at the Asserted Claims.

Statements concerning obviousness in the Invalidity Contentions Exhibits illustrate just

examples of such combinations and combination rationales. ecobee further reserve the right to rely upon other combinations and combination rationales disclosed within the prosecution history of the references cited herein.

ecobee's contentions that the references in this section, in various combinations, render the Asserted Claims of the Asserted Patents obvious under 35 U.S.C. § 103 are not an admission or suggestion that each reference does not independently anticipate the asserted claims under 35 U.S.C. § 102. Any of the references disclosed herein may be combined with other references disclosed herein, to render obvious, and therefore invalid, each of the Asserted Claims of the Asserted Patents.

ecobee is presently unaware of any evidence of secondary considerations that are relevant to the Asserted Patents. Ollnova has not yet cited any secondary considerations of nonobviousness. To the extent that Ollnova asserts or relies on any evidence of alleged secondary considerations, evidence will also establish or rebut any alleged or claimed secondary considerations in full. As such, if and in the event Ollnova cites to, asserts, or relies on evidence of any alleged secondary considerations, ecobee reserves the right to supplement these Invalidity Contentions to address the same.

IV. Patent Local Rule 3-3(c): Charts Identifying Specifically Where and How in Each Prior Art Each Asserted Claim is Found

Pursuant to Patent L.R. 3-3(c), charts identifying where specifically in each alleged item of prior art each limitation of each Asserted Claim is found are attached in the Invalidity Contentions Exhibits. The contents of these exhibits, in combination with the foregoing patents, publications, and systems, anticipate and/or render obvious the Asserted Claims of the Asserted Patents under 35 U.S.C. § 102, either expressly or inherently, and under § 103, in each case, as understood by a POSITA.

Exhibit No.	Invalidity Basis
A-1	Invalidity of the '282 patent in view of U.S. Patent No. 7,792,126 ("Montestruque")
A-2	Invalidity of the '282 patent in view of U.S. Patent No. 7,274,973 ("Nichols")
A-3	Invalidity of the '282 patent in view of U.S. Patent Application Publication No. 2004/0008651 ("Ahmed")
A-4	Invalidity of the '282 patent in view of U.S. Patent Application Publication No. 2005/0017873 ("Liu")
A-5	Invalidity of the '282 patent in view of U.S. Patent Application Publication No. 2006/0028997 ("McFarland")
A-6	Invalidity of the '282 patent in view of U.S. Patent No. 6,437,692 ("Petite")
A-7	Invalidity of the '282 patent in view of U.S. Patent Application Publication No. 2005/0275530 ("Kates")
A-8	Invalidity of the '282 patent in view of Simon Wireless Security System ("Simon")
A-9	Invalidity of the '282 patent in view of ecobee SMART Thermostat ⁴
A-10	Invalidity of the '282 patent in view of U.S. Patent Application Publication No. 2004/0100394 ("Hitt")
B-1	Invalidity of the '887 patent in view of U.S. Patent No. 5,715,177 ("Machida")
B-2	Invalidity of the '887 patent in view of U.S. Patent Application Publication No. 2005/0275530 ("Kates")
B-3	Invalidity of the '887 patent in view of U.S. Patent Application Publication No. 2006/0152335 ("Helgeson")
B-4	Invalidity of the '887 patent in view of U.S. Patent No. 7,058,477 ("Rosen")
B-5	Invalidity of the '887 patent in view of U.S. Patent Application Publication No. 2003/0137968 ("Lareau")
B-6	Invalidity of the '887 patent in view of Simon Wireless Security System ("Simon")
B-7	Invalidity of the '887 patent in view of U.S. Patent Application Publication No. 2005/0200474 ("Behnke")
B-8	Invalidity of the '887 patent in view of U.S. Patent Application Publication No. 2003/0096590 ("Sato")
B-9	Invalidity of the '887 patent in view of U.S. Patent No. 7,274,973 ("Nichols")
C-1	Invalidity of the '495 patent in view of U.S. Patent Application Publication No. 2004/0008651 ("Ahmed")
C-2	Invalidity of the '495 patent in view of U.S. Patent Application Publication No. 2004/0122930 ("Pasternak")
C-3	Invalidity of the '495 patent in view of U.S. Patent No. 8,984,500 ("Mesarina")
C-4	Invalidity of the '495 patent in view of U.S. Patent Application Publication No. 2003/0151513 ("Herrmann")

⁴ Exhibit A-9 contains information designated Confidential - Attorneys' Eyes Only under the Protective Order.

Exhibit No.	Invalidity Basis
C-5	Invalidity of the '495 patent in view of Simon Wireless Security System ("Simon")
C-6	Invalidity of the '495 patent in view of U.S. Patent No. 7,460,865 ("Nixon")
C-7	Invalidity of the '495 patent in view of U.S. Patent No. 6,619,555 ("Rosen")
D-1	Invalidity of the '371 patent in view of U.S. Patent Application Publication No. 2003/0151513 ("Herrmann")
D-2	Invalidity of the '371 patent in view of U.S. Patent Application Publication No. 2006/0152335 ("Helgeson")
D-3	Invalidity of the '371 patent in view of U.S. Patent Application Publication No. 2004/0100394 ("Hitt")
D-4	Invalidity of the '371 patent in view of U.S. Patent Application Publication No. 2005/0275530 ("Kates")
D-5	Invalidity of the '371 patent in view of U.S. Patent No. 7,920,841 ("Martin")
D-6	Invalidity of the '371 patent in view of Simon Wireless Security System ("Simon")
D-7	Invalidity of the '371 patent in view of U.S. Patent Application Publication No. 2006/0028997 ("McFarland")
D-8	Invalidity of the '371 patent in view of U.S. Patent No. 7,650,425 ("Davis")

V. Patent Local Rule 3-3(d): Other Grounds for Invalidity

A. Ineligibility Under 35 U.S.C. § 101

ecobee contends that the Asserted Claims are patent ineligible for failing to claim patentable subject matter. ecobee hereby incorporated by reference its Subject Matter Eligibility Contentions that were served on July 27, 2022, and any amendments and/or supplementations thereto.⁵

B. Invalidity Based on Enablement and/or Written Description under 35 U.S.C. § 112, ¶ 1

ecobee contends that the following claim limitations—which relate to the enumerated claims and all claims that depend from such enumerated claims—are not enabled or adequately described by the specification, as required by 35 U.S.C. § 112 ¶ 1, including in view of

⁵ ecobee further contends that the claims of the '282 and '887 patents are unenforceable due to inequitable conduct, the grounds for which are set forth in its Answer, Defenses and Counterclaims (Dkt. 68).

Ollnova's apparent interpretation of these claim limitations set forth in its Infringement

Contentions, to the extent that they can be understood:

Exemplary Claim(s)	Claim Limitation(s)
'282 patent, claim 1	"receive sensor control information related to sensor data in control at a second automation component in communication with the building automation system"
'282 patent, claim 1	"communicate a portion of the stored sensor data corresponding to the received sensor control information to the second automation component."
'282 patent, claims 1, 7, 13, 20	"second automation component"
'282 patent, claims 3, 9, 15, 20	"identify sensor values within the sensor data that exceed a corresponding change-of-value threshold" / "identifying changed sensor values within the sensor data"
'282 patent, claims 7, 19	"receive status [data/information] related to sensor data in control at a second automation component [in communication with the building automation system]"
'282 patent, claim 7	"determine the sensor data in control at the second automation component based on the received status data"
'282 patent, claim 7	"communicate the stored sensor data corresponding the sensor data in control to the second automation component"
'282 patent, claim 13	"receive a wake-up command from a second automation component"
'282 patent, claim 13	"communicate stored sensor data related to the sensor data in control at a second automation component"
'282 patent, claim 13	"receive a power-down command from the second automation component"
'282 patent, claim 20	"communicating a portion of the identified changed sensor values associated with the first communication received from the second automation component"
'282 patent, claim 21	"wherein identifying changed sensor values includes identifying changed sensor values as a function of a change-of-value threshold"
'887 patent, claim 1	"sensor operable to generate a indicator for a sensed condition"
'887 patent, claims 1, 5, 8, 14, 20, 21	"indicator"
'887 patent, Claim 20	"controller is configured to poll the sensor during a period of the transmission interval to read the indicator during a current period of the transmission interval"
'495 patent, claim 1	"a second wireless network in the building having a second wireless communications protocol, the first wireless communications protocol different than the second wireless communications protocol"
'495 patent,	"wherein the first wireless network is operable to control, free of

Exemplary Claim(s)	Claim Limitation(s)
claim 1	communications with the second wireless network, building components in response to sensors operable within the first wireless network”
’495 patent, claim 3	“the first wireless network comprises a first plurality of first processors and the second wireless network comprises a second plurality of second processors, the second processors having a greater processing power and storage capacity than the first processors”
’495 patent, claim 5	“the second wireless network including aggregate communications corresponding to a plurality of sensors, actuators or combinations thereof, and the first wireless network excluding aggregate communications corresponding to the plurality of sensors, actuators and combinations thereof”
’495 patent, claim 6	“at least one processor of the second wireless network wirelessly communicates with the first wireless network, processors of the first wireless network only capable of communication pursuant to the first communications protocol”
’495 patent, claim 10	“the second wireless network is operable to instruct a redirection of first wireless network sensor data to the second wireless network, the building components responsive to communications from the second wireless network”
’495 patent, claim 12	“the second wireless network is operable to dynamically assign control processing among a plurality of components and to instruct components of the first wireless network to be responsive to the dynamically assigned control processing”
’371 patent, claim 1	“process a change-of-value request message”
’371 patent, claims 1, 8	“generat[e]/[ing] a change-of-value update [in response to the change-of-value request message, wherein the change-of-value update]/[that] includes a plurality of change-of-value messages received from a plurality of devices”
’371 patent, claim 13	“receive at least one change-of-value update via the wireless communications component, wherein the change-of-value update includes a plurality of change-of-value messages received from a plurality of devices”
’371 patent, claim 13	“communicate the at least one change-of-value update in response to a polling request and repeat the at least one change-of-value update at regular intervals according to a schedule or until a change-of value acknowledgment is received”
’371 patent, claim 17	“receiving a plurality of change-of-value messages from a plurality of wireless devices, each of the plurality of change-of-value messages representing a wireless device indication”
’371 patent, claims 1, 13, 17	“communicat[e]/[ing] . . . at regular intervals according to a schedule or until a change-of-value acknowledgment is received”
’371 patent, claim 8	“repetitively communicating the change-of-value update in response to the detected indication”

Exemplary Claim(s)	Claim Limitation(s)
'371 patent, claim 8	"receiving an acknowledgment of the communicated change-of-value update"
'371 patent, claim 6	"wherein the change-of-value update is pulled to a field panel transceiver in response to the reception of the change-of-value request message by the wireless communication component"
'371 patent, claim 7	"process an acknowledgment message communicated by the field panel transceiver in response to the change-of-value update."
'371 patent, claim 10, 19	"device indicator"
'371 patent, claim 13	"storing the at least one change-of-value update corresponding to at least one wireless device"
'371 patent, claims 8, 17	"automation components"

ecobee reserves the right to identify additional claim limitations that are not enabled or adequately described by the specification, including in view of further information from Ollnova, information discovered during discovery, or a claim construction ruling by the Court.

C. Invalidity Based on Indefiniteness under 35 U.S.C. § 112, ¶ 2

ecobee identifies the elements listed below as indefinite under 35 U.S.C. § 112 ¶ 2 for failure to particularly point out and distinctly define the subject matter covered by the claims, including in view of Ollnova's apparent interpretation of these claim limitations set forth in its Infringement Contentions, to the extent that they can be understood:

Exemplary Claim(s)	Claim Limitation(s)
'282 patent, claims 1, 7, 13, 20	"a multi-sensor package"
'282 patent, claim 1	"sensor control information related to sensor data in control at a second automation component"
'282 patent, claim 1	"stored sensor data corresponding to the received sensor control information to the second automation component."
'282 patent, claims 4, 7, 16	"set an identification flag for each identified sensor value."
'282 patent, claims 1, 7, 13, 20	"second automation component"
'282 patent, claims 3, 9, 15, 20	"identify sensor values within the sensor data that exceed a corresponding change-of-value threshold" / "identifying changed sensor values within the sensor data"
'282 patent,	"status [data/information] related to sensor data in control at a second

Exemplary Claim(s)	Claim Limitation(s)
claims 7, 19	automation component [in communication with the building automation system]”
’282 patent, claim 7	“determine the sensor data in control at the second automation component based on the received status data”
’282 patent, claim 7	“stored sensor data corresponding the sensor data in control to the second automation component”
’282 patent, claim 13	“a wake-up command from a second automation component”
’282 patent, claim 13	“stored sensor data related to the sensor data in control at a second automation component”
’282 patent, claim 13	“a power-down command from the second automation component”
’282 patent, claim 20	“a portion of the identified changed sensor values associated with the first communication received from the second automation component”
’282 patent, claim 21	“identifying changed sensor values as a function of a change-of-value threshold”
’887 patent, claim 1	“a controller configured to poll the sensor at a polling interval to read the indicator during a current period of the polling interval”
’887 patent, claim 1	“selectively operate the transceiver to communicate information associated reading of the indicator”
’887 patent, claim 1	“the memory stores at least one prior reading of the indicator, the prior reading of the indicator made during a prior period of the polling interval”
’887 patent, claim 1	“transmit a most recent reading of the indicator stored in the memory”
’887 patent, claim 1	“transmission ... is suspended in response to detecting a change in the sensed condition within the predetermined range”
’887 patent, claims 1, 5, 8, 14, 20, 21	“indicator”
’887 patent, claims 5, 6	“band limit”
’887 patent, claim 8	“externally-received transmission control signal”
’887 patent, claims 14, 15	“timing data”
’495 patent, claim 1	“a second wireless network in the building having a second wireless communications protocol, the first wireless communications protocol different than the second wireless communications protocol”
’495 patent, claim 1	“wherein the first wireless network is operable to control, free of communications with the second wireless network, building components in response to sensors operable within the first wireless network”

Exemplary Claim(s)	Claim Limitation(s)
'495 patent, claim 2	"the first wireless communications protocol has a first bandwidth and the second wireless communications protocol has a second bandwidth, the first bandwidth less than the second bandwidth"
'495 patent, claim 3	"the second processors having a greater processing power and storage capacity than the first processors"
'495 patent, claim 4	"local area"
'495 patent, claim 5	"the second wireless network including aggregate communications corresponding to a plurality of sensors, actuators or combinations thereof, and the first wireless network excluding aggregate communications corresponding to the plurality of sensors, actuators and combinations thereof"
'495 patent, claim 6	"at least one processor of the second wireless network wirelessly communicates with the first wireless network, processors of the first wireless network only capable of communication pursuant to the first communications protocol"
'495 patent, claim 10	"the second wireless network is operable to instruct a redirection of first wireless network sensor data to the second wireless network, the building components responsive to communications from the second wireless network"
'495 patent, claim 12	"the second wireless network is operable to dynamically assign control processing among a plurality of components and to instruct components of the first wireless network to be responsive to the dynamically assigned control processing"
'371 patent, claim 1	"change-of-value request message"
'371 patent, claims 1, 8, 13, 17	"change-of-value update [that] includes a plurality of change-of-value messages [received from a plurality of devices]"
'371 patent, claim 2	"received from a wireless device"
'371 patent, claim 4	"change-of-value response message"
'371 patent, claims 1, 13, 17	"communicat[e]/[ing] . . . at regular intervals according to a schedule or until a change-of-value acknowledgment is received"
'371 patent, claim 8	"repetitively communicating the change-of-value update in response to the detected indication"
'371 patent, claim 8	"receiving an acknowledgment of the communicated change-of-value update"
'371 patent, claim 5	"wherein the change of value update is automatically communicated"
'371 patent, claim 6	"wherein the change-of-value update is pulled to a field panel transceiver in response to the reception of the change-of-value request message by the wireless communication component"
'371 patent, claim 7	"process an acknowledgment message communicated by the field panel transceiver in response to the change-of-value update"

Exemplary Claim(s)	Claim Limitation(s)
'371 patent, claims 8, 17	"automation components"
'371 patent, claim 10	"the change-of-value"
'371 patent, claim 10, 19	"device indicator"
'371 patent, claim 11	"wherein communicating the change-of-value update includes automatically communicating the change-of-value update."
'371 patent, claim 13	"wherein the change-of-value update includes a plurality of change-of-value messages received from a plurality of devices"
'371 patent, claim 13	"storing the at least one change-of-value update corresponding to at least one wireless device"
'371 patent, claim 15	"wherein the change-of-value update is a pushed communication"
'371 patent, claim 17	"device indication"
'371 patent, claim 18	"wherein the wireless device indication is selected from a sensor reading, a temperature indication, or an actuator position."
'371 patent, claim 19	"the change-of-value"
'371 patent, claim 20	"wherein communicating the change-of-value update includes automatically communicating the change-of-value-update."

ecobee reserves the right to identify additional claim limitations that are indefinite, including in view of further information from Ollnova, information discovered during discovery, or a claim construction ruling by the Court.

VI. Patent Local Rule 3-4 Production

ecobee is concurrently producing or has already produced documents required by LPR 3-4(a) and (b), including documents stamped with BATES Nos. ecobee-Ollnova-000086809 – ecobee-Ollnova-000091840.

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CERTIFICATE OF SERVICE

I hereby certify that this document and exhibits thereto are being served upon counsel of record for Plaintiff on October 12, 2022.

/s/ Jason M. Dorsky
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