

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

<b>KARAMELION LLC,</b>  Plaintiff,  v.  <b>ADT LLC,</b>  Defendant.	CASE NO. 2:18-cv-330-JRG (Consolidated) (Lead Case) <b>PATENT CASE</b>  <b>JURY TRIAL DEMANDED</b>
<b>KARAMELION LLC,</b>  Plaintiff,  v.  <b>AT&amp;T DIGITAL LIFE, INC.,</b>  Defendant.	CASE NO. 2:18-cv-331-JRG (Consolidated) (Member Case) <b>PATENT CASE</b>  <b>JURY TRIAL DEMANDED</b>

**AMENDED COMPLAINT FOR PATENT INFRINGEMENT  
AGAINST AT&T DIGITAL LIFE, INC.**

Plaintiff Karamelion LLC files this Amended Complaint for Patent Infringement against AT&T Digital Life, Inc., and would respectfully show the Court as follows:

**I. THE PARTIES**

1. Plaintiff Karamelion LLC (“Karamelion” or “Plaintiff”) is a Texas limited liability company with its principal place of business at 5570 FM 423, Suite 250 #2022, Frisco, TX 75034.

2. On information and belief, Defendant AT&T Digital Life, Inc. (“Defendant”) is a corporation organized and existing under the laws of New York, with places of business at 1712 East Grand Avenue, Marshall, Texas 75670, 2306 Gilmer Road, Longview, TX 75604, 4757 South Broadway Avenue Tyler, Texas 75703, and 1214 N. US Highway 259, Kilgore, TX 75662. Defendant has a registered agent at C T Corporation System, 1999 Bryan St., Ste. 900 Dallas, TX 75201.

## **II. JURISDICTION AND VENUE**

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction of such action under 28 U.S.C. §§ 1331 and 1338(a).

4. On information and belief, Defendant is subject to this Court's specific and general personal jurisdiction, pursuant to due process and the Texas Long-Arm Statute, due at least to its business in this forum, including at least a portion of the infringements alleged herein. Furthermore, Defendant is subject to this Court's specific and general personal jurisdiction because Defendant has places of business within the district at 1712 East Grand Avenue, Marshall, Texas 75670, 2306 Gilmer Road, Longview, TX 75604, 4757 South Broadway Avenue Tyler, Texas 75703, and 1214 N. US Highway 259, Kilgore, TX 75662.

5. Without limitation, on information and belief, within this state, Defendant has used the patented inventions thereby committing, and continuing to commit, acts of patent infringement alleged herein. In addition, on information and belief, Defendant has derived revenues from its infringing acts occurring within the Eastern District of Texas and Texas. Further, on information and belief, Defendant is subject to the Court's general jurisdiction, including from regularly doing or soliciting business, engaging in other persistent courses of conduct, and deriving substantial revenue from goods and services provided to persons or entities in Eastern District of Texas and Texas. Further, on information and belief, Defendant is subject to the Court's personal jurisdiction at least due to its sale of products and/or services within the Eastern District of Texas. Defendant has committed such purposeful acts and/or transactions in the Eastern District of Texas such that it reasonably should know and expect that it could be haled into this Court as a consequence of such activity.

6. Venue is proper in this district under 28 U.S.C. § 1400(b). Defendant has places of business within the district at 1712 East Grand Avenue, Marshall, Texas 75670, 2306 Gilmer Road, Longview, TX 75604, 4757 South Broadway Avenue Tyler, Texas 75703, and 1214 N. US Highway 259, Kilgore, TX 75662. On information and belief, from and within this District Defendant has also committed at least a portion of the infringements at issue in this case.

7. For these reasons, personal jurisdiction exists and venue is proper in this Court under 28 U.S.C. § 1400(b).

**III. COUNT I**  
**(PATENT INFRINGEMENT OF UNITED STATES PATENT NO. 6,275,166)**

8. Plaintiff incorporates the above paragraphs herein by reference.

9. On August 14, 2001, United States Patent No. 6,275,166 (“the ‘166 Patent”) was duly and legally issued by the United States Patent and Trademark Office. The application leading to the ‘166 patent was filed on January 19, 1999. (Ex. A at cover). The ‘166 Patent is titled “RF Remote Appliance Control/Monitoring System.” A true and correct copy of the ‘166 Patent is attached hereto as Exhibit A and incorporated herein by reference.

10. Plaintiff is the assignee of all right, title and interest in the ‘166 patent, including all rights to enforce and prosecute actions for infringement and to collect damages for all relevant times against infringers of the ‘166 Patent. Accordingly, Plaintiff possesses the exclusive right and standing to prosecute the present action for infringement of the ‘166 Patent by Defendant.

11. The invention in the ‘166 Patent relates to control and monitoring of distributed systems in buildings such as systems for controlling and monitoring heating, air conditioning, lighting, security, occupancy, and usage of distributed facilities. (Ex. A at col. 1:5-12). Control of such distributed systems in the prior art commonly used computer networks and business

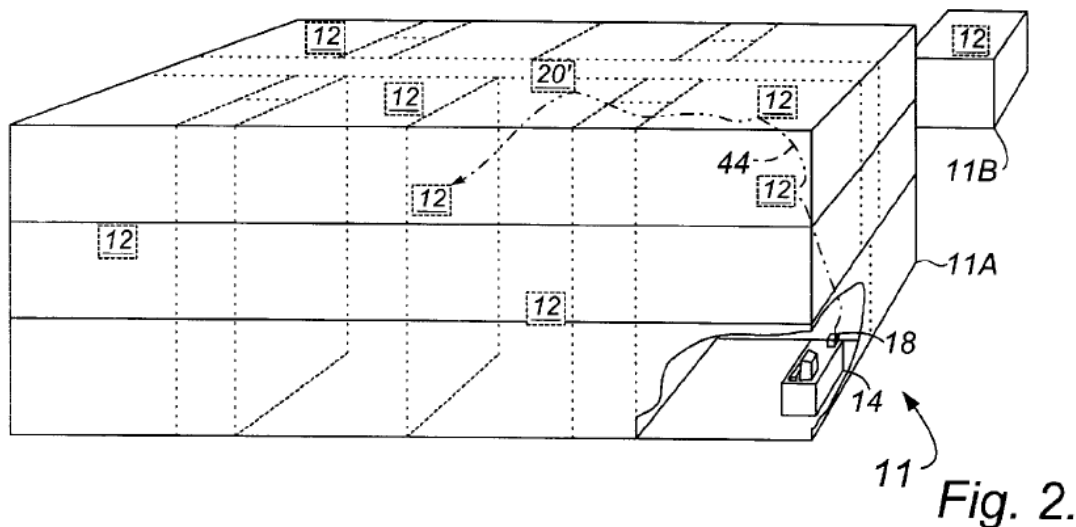
software. (*Id.* at col. 1:11-13). A major difficult with such systems was the expense of wiring inter-connections between elements of the system, particularly when there are additions or changes to be made in the system. (*Id.* at col. 1:14-18). Prior art attempts to reduce the expense of the systems included using efficient network products such as using a widely known Ethernet standard, using AC power wiring to transmit RF communications to remove controllers, and using a combination of wired and wireless communications. (*Id.* at col. 1:18-27).

12. However, these centralized wireless control systems for building appliances have not been widely used mainly because systems that have a sufficient communication ranges are normally subject to regulations and licensing requirements that are prohibitively expensive. (*Id.* at col. 1:28-32). Also, systems that are powerful enough to be used in widely distributed installations are unnecessarily expensive to be used in smaller installations. (*Id.* at col. 1:32-34). With respect to wireless communication, there is limited availability of RF carrier frequencies, and potential interference with other nearby systems that might be operating in similar frequencies. (*Id.* at col. 1:34-37). Because of the continued deficiencies of the prior art solutions, there was a need for a wireless appliance control system that overcomes the disadvantages of the prior art solutions. (*Id.* at col. 1:38-39).

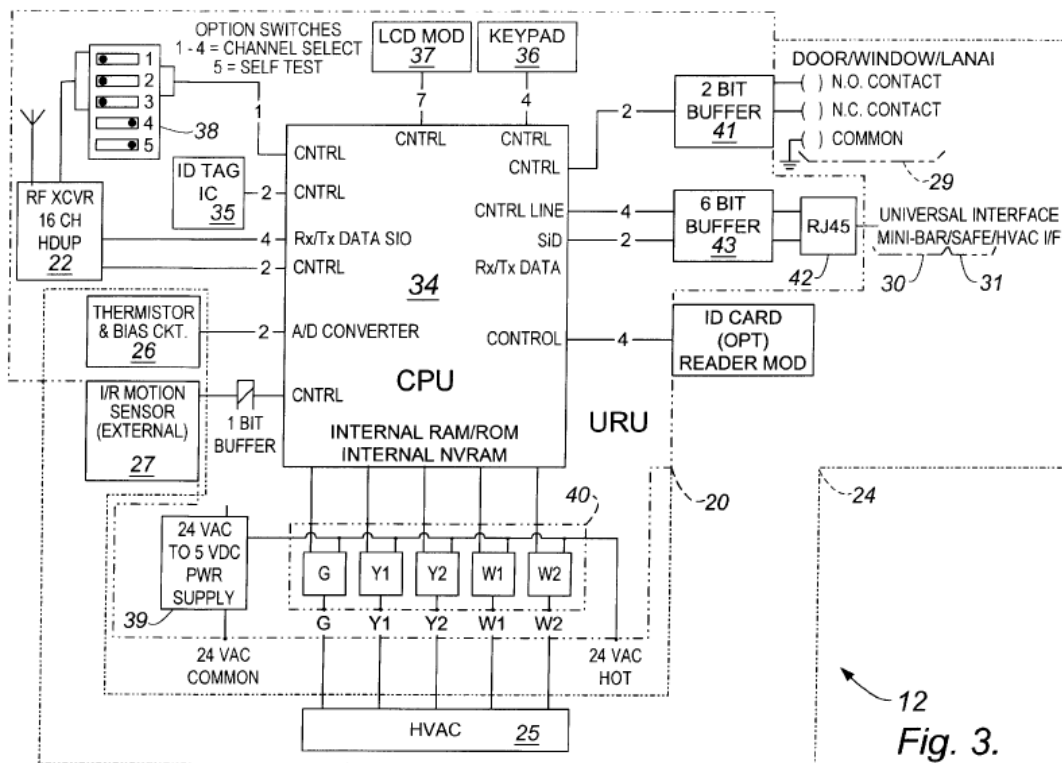
13. The inventors developed an invention that “meets this need by providing a wireless configuration that uses a distributed array of low power (short range) wireless controllers that are also functional as relay units for communicating with a headend control computer at long range.” (*Id.* at col. 1:42-46).

14. The ‘166 patent discloses exemplary embodiments of the claimed invention. The claimed invention is typically implemented in a building or location that has an appliance control/monitoring system. (*Id.* at col. 3:64 – col. 4:7). For example, the following figure is of a

building (11) having a distributed array of appliance management stations (12) that wirelessly communicate with a headend control station (14) (*Id.* at col. 3:66 – col. 4:4):



The typical appliances connected to the appliance control/monitoring system are heating, ventilation and air conditioning units (HVAC), temperature sensors, motion detectors, and audio/video devices. (*Id.* at col. 1:5-9, col. 4:54-61). The appliances are interfaced with relay units that have appliance interface/controllers to communicate with the appliance and satellite radio transceivers. (*Id.* at col. 4:62-66). The satellite radio transceivers of the relay units are operable at low power and have a limited wireless communications range that reaches only a portion of the building or location. (*Id.* at col. 4:62-66). In order to for the relay units to communicate beyond their limited wireless range, they communicate by relaying transmissions using intermediate relay units to the intended destination. (*Id.* at col. 4:66 – col. 5:1). An exemplary simplified circuit block diagram of the appliance controller portion of the relay unit, including a satellite radio transceiver, is shown in Figure 3 of the ‘166 patent:



12  
Fig. 3.

(Ex. A). The microprocessor (34) is connected between a satellite transceiver (22) and the appliance device (24). (*Id.* at col. 5:13-15).

15. The '188 patent includes a diagram of an exemplary command protocol (Fig. 4) and exemplary return protocol (Fig. 5):

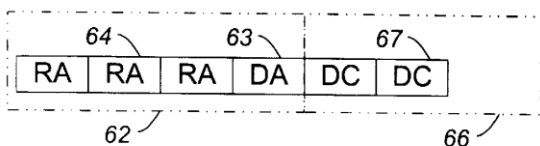


Fig. 4. 60

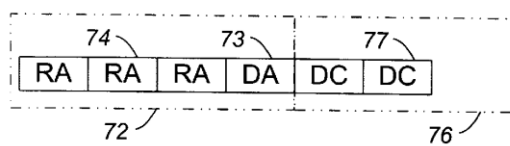
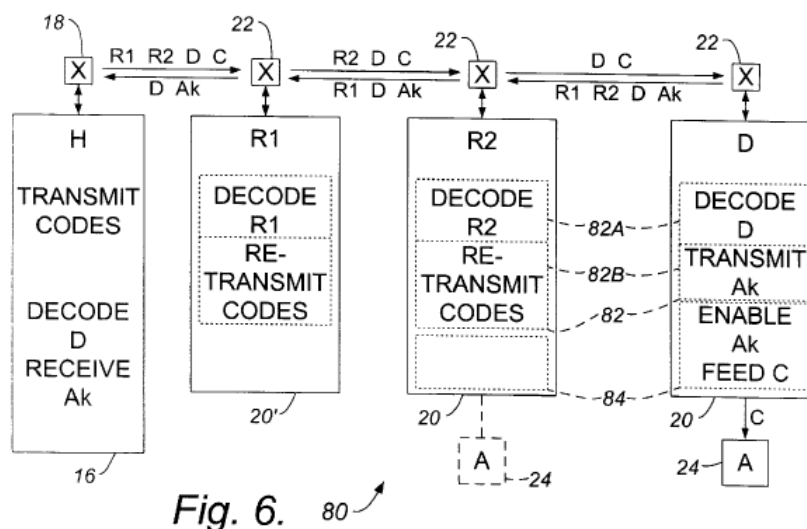


Fig. 5. 70

(Ex. A). The exemplary command protocol includes an address section (62) that includes a destination address (63) and may include relay addresses (64) so that the message may be relayed to another device. (*Id.* at col. 7:40-43). Following the address section is a command section (66) that includes device commands (67) that are directed to particular appliance devices at the destination relay unit. (*Id.* at col. 7:43-47). The exemplary return protocol includes a

counterpart of the address section (72) that includes a destination address (73) and relay addresses (74). (*Id.* at col. 7:48-51). Following the address section of the return protocol is a feedback section (76) that include feedback elements (77) that are responsive to the appliance devices at the destination relay unit. (*Id.* at col. 7:51-55).

16. A pictorial diagram showing an exemplary process for using a portion of the system is shown in Figure 6 of the '166 patent:



(Ex. A). A transmitter in the headend computer (H) signals the addresses of relay units (20), with one of the addresses being the destination address (D), and the other addresses include a first and second relay address (R1, R2), and a control signal (C) for appliance (A) being interfaced to the destination relay unit (D). (*Id.* at col. 7:56-65). The first relay unit decodes the first relay address, and transmits the control signal, the second relay address and the destination address from the first relay unit; the same steps occur at the second relay unit but with respect to decoding the second relay address. (*Id.* at col. 7:65 – col. 8:1). The destination relay unit decodes the destination address and feeds the control signal to the appliance; then the destination unit transmits the destination address, the first and second relay addresses, and an acknowledgement signal (Ak). (*Id.* at col. 8:2-6). The second relay unit decodes the second

relay address, and then transmits the acknowledgement signal (Ak), the first relay address, and the destination address; the same steps occur at the first relay unit but with respect to decoding the first relay address. (*Id.* at col. 8:6-9). The headend computer decodes the destination address and receives the acknowledgement signal (Ak). (*Id.* at col. 8:9-11). The decoding and transmitting in the relay units are implemented by first and second instruction portions (82A, 82B), respectively, of the relay program (82). (*Id.* at col. 8:11-14). The feeding of the control signal by the relay unit to the appliance and generating the acknowledgement signal occurs in the appliance program (84). (*Id.* at col. 8:14-16). Both the relay program and appliance program are in the microcomputer memory of each relay unit. (*Id.* at col. 8:16-18).

17. As explained during the prosecution history, the prior art did not teach a relay unit being an appliance controller that communicated with a headend computer using at least two other relay units. The invention therefore overcame the prior art, which were excessively expensive, had insufficient bandwidth, were ineffective in serving multiple devices, were unreliable, and were difficult to use. (Ex. B at col. 1:43-51).

18. **Direct Infringement.** Upon information and belief, Defendant has been directly infringing at least claim 1 of the '166 patent in the Eastern District of Texas and Texas, by performing actions comprising making, using, selling, and offering for sale an appliance controller for a distributed appliance system having a headend computer, a multiplicity of appliances, and a plurality of relay units that satisfies the limitations of at least claim 1, including without limitation the Digital Life Control Panel, Light Plug and Appliance Module, Smart Thermostat, Light Switch, Garage Door Controller, and Door Lock ("Accused Instrumentality"). Karamelion incorporates by reference the PR 3-1 infringement contentions that it served on Defendant in this case.



19. Accused Instrumentality provides an appliance controller (*e.g.*, a Digital Life Control Panel, Light Plug and Appliance Module, Smart Thermostat, Light Switch, Garage Door Controller, and Door Lock) for a distributed appliance system (*e.g.*, Z-Wave network) having a headend computer (*e.g.*, primary controller, the Digital Life Control panel), a multiplicity of appliances (*e.g.*, appliances such as lights, switches, door locks, etc.), and a plurality of relay units (*e.g.*, repeaters), one of the relay units being the appliance controller (*e.g.*, Z-wave node).

20. Each Accused Instrumentality is an appliance controller comprising a low power satellite radio transceiver (*e.g.*, radio frequency transceivers within the various Z-Wave devices) having a range being less than a distance to at least some of the appliances.

### Digital Life Monitoring Options Compared

Digital Life's packages include both service and equipment.

Their entry level plan, **Smart Security**, is \$39.99 per month and includes several hundred dollars worth of free equipment. But, there is another gotcha. The equipment doesn't necessarily have to be new. If you dig into the terms and conditions, you will notice that they reserve the right to provide "**like new equipment**". This helps keep the cost low, and it's one of the reasons why they can offer so much equipment upfront.

With Smart Security, you will receive 24/7 professional monitoring. You will also receive an indoor siren, keypad, motion sensor, 4 window sensors, and 2 contact sensors. If you don't know the difference between the different sensor types, you are not alone; we'll break that down soon.

Their second level package, **Smart Security and Automation**, is \$54.99 per month and includes a touchscreen panel. The panel is equipped to communicate and control your entire system, both security and automation. The panel communicates using Z-Wave, which is a popular smart home protocol. It also uses Wi-Fi and 3G cellular to keep your home safe. From an equipment perspective, this package includes a little more. It includes 1 indoor siren, 1 motion sensor, 1 keypad, 7 window sensors, 2 contact sensors, 1 outdoor camera, and 1 door lock pushbutton in nickel.

(*E.g.*, <https://homealarmreport.com/att-digital-life-review/>).

### Third-Party Products Work Too

The Samsung SmartCam HD Pro isn't the only third-party device that you can use with your Digital Life security system. AT&T also has partnerships with Lutron and Sengled. Both companies focus on light automation. Using your Digital Life app, you can automate your Sengled Element light bulb or your Lutron Caseta Wireless products including the plug-in lamp dimmer, in-wall dimmer, and Serena motorized shades. Connecting Lutron products to your Digital Life system requires the purchase of a Lutron Caseta Wireless Smart Bridge.

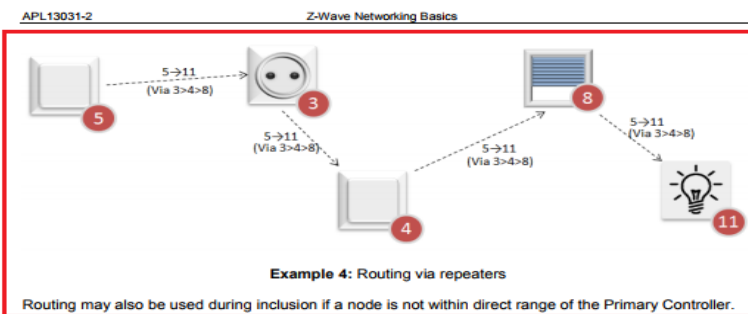
- Full Home Automation
- Video Surveillance
- iOS, Android, Windows Phone, and Blackberry
- Text & Email Alerts
- Z-Wave Communication

(E.g., <https://homealarmreport.com/att-digital-life-review/>).

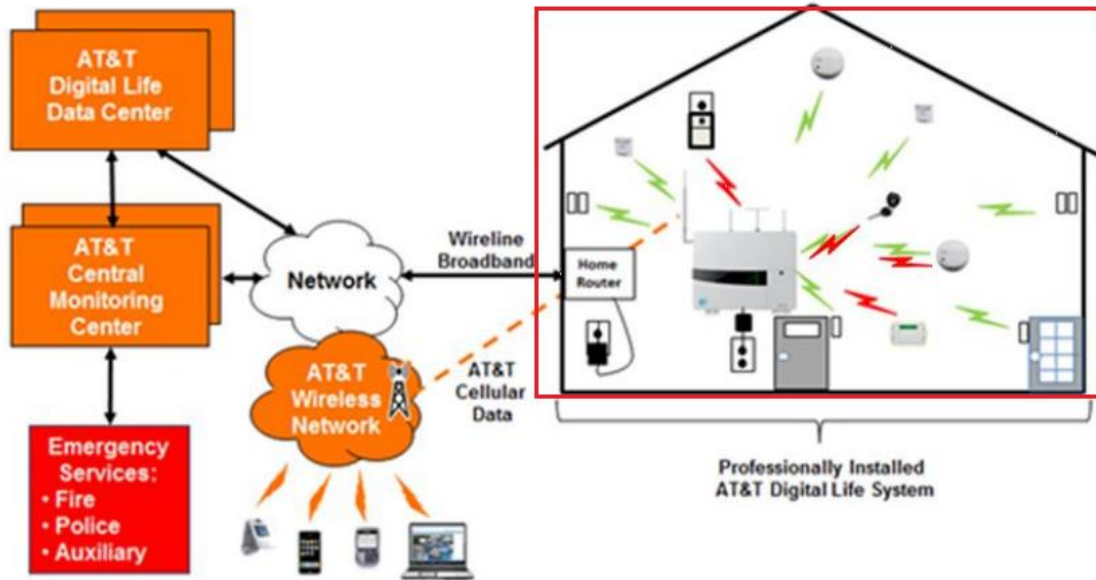
The Z-Wave Protocol handles transmissions to destinations all over the network. If necessary, other nodes are used as repeaters. This is called routing.

During bootstrapping, the Primary Controller asks the new node to discover its neighbors. Thanks to the neighbor nodes information, the Primary Controller builds a network map and knows the different possible routes to reach a node.

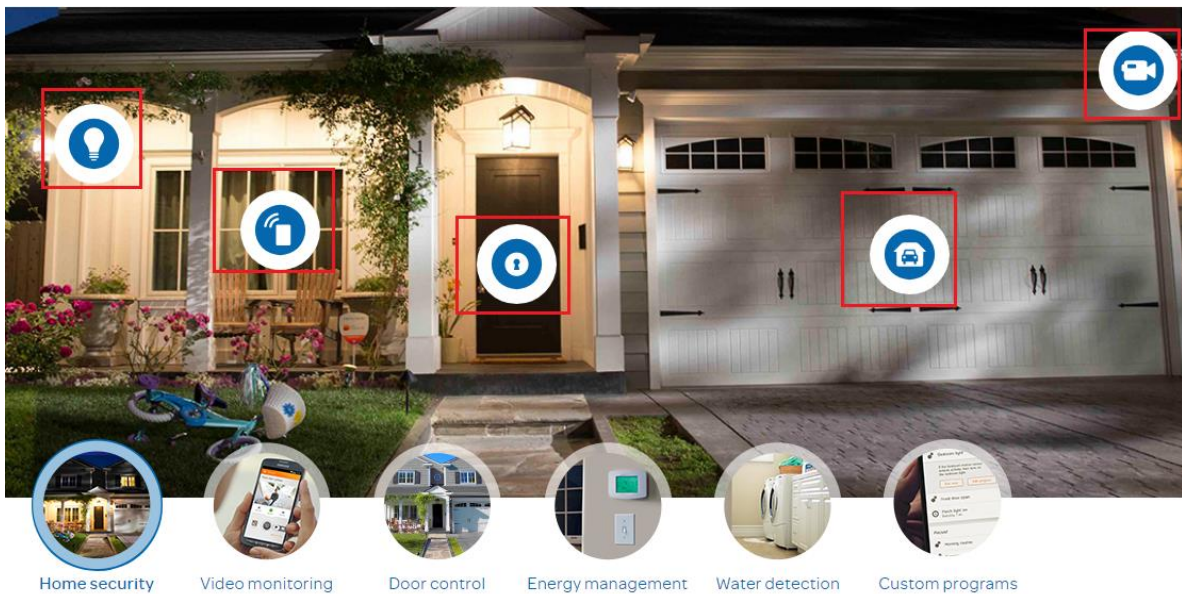
When using repeaters, the Sending node includes the route information in the frame. Each repeater parses the routing information and forwards the frame accordingly.



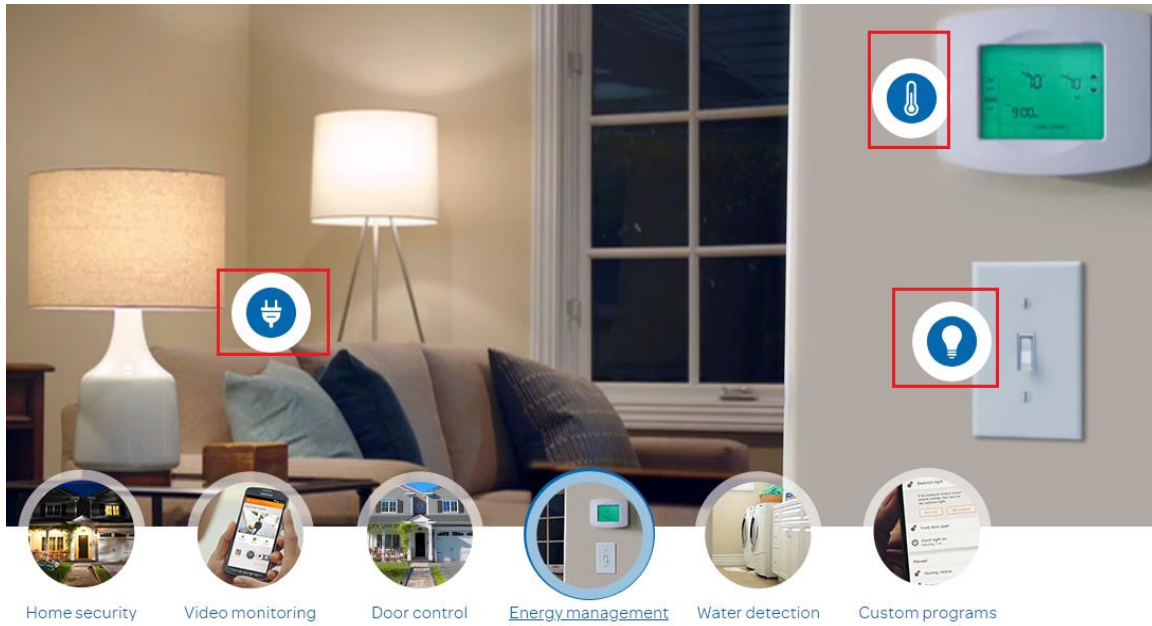
(<http://zwavepublic.com/sites/default/files/APL13031-2%20-%20Z-Wave%20Networking%20Basics.pdf>).



<https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf>



<https://my-digitallife.att.com/learn/explore-home-automation>



<https://my-digitallife.att.com/learn/explore-home-automation>.

### Thermostat



#### Details ▼

- Allows you to remotely control the temperature in your home.
- You can also create a program to adjust automatically on a set schedule.

<https://my-digitallife.att.com/learn/shop>.

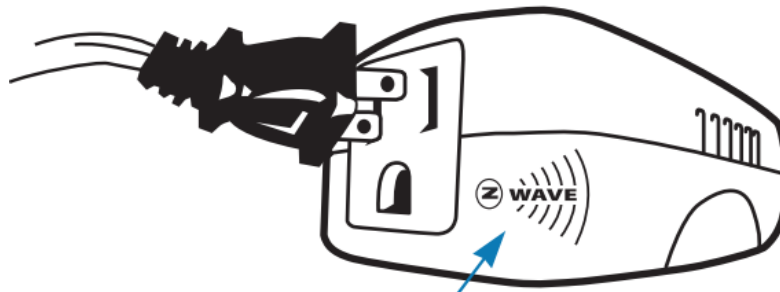


Details ▼

- Dual plug that lets you power and control a small appliance or lamp.

<https://my-digitallife.att.com/learn/shop>).

- 1** Insert your appliance into Zwave plug  
Do not use other plug side



Note Zwave Logo for correct side

<https://my-digitallife.att.com/content/dam/Support/device-installation/Indoor%20Smart%20Plug.pdf>).

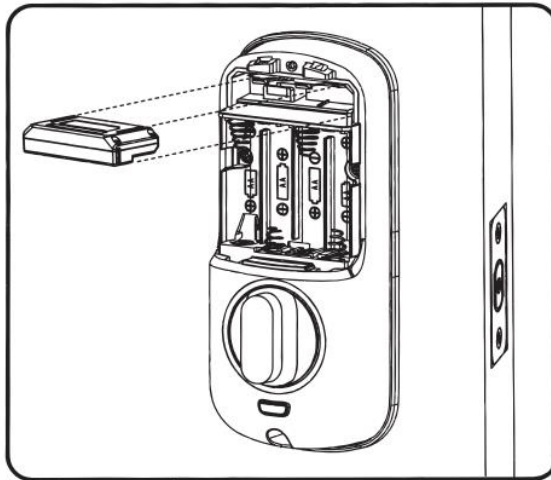
### Door Lock Keyless



#### Details ▼

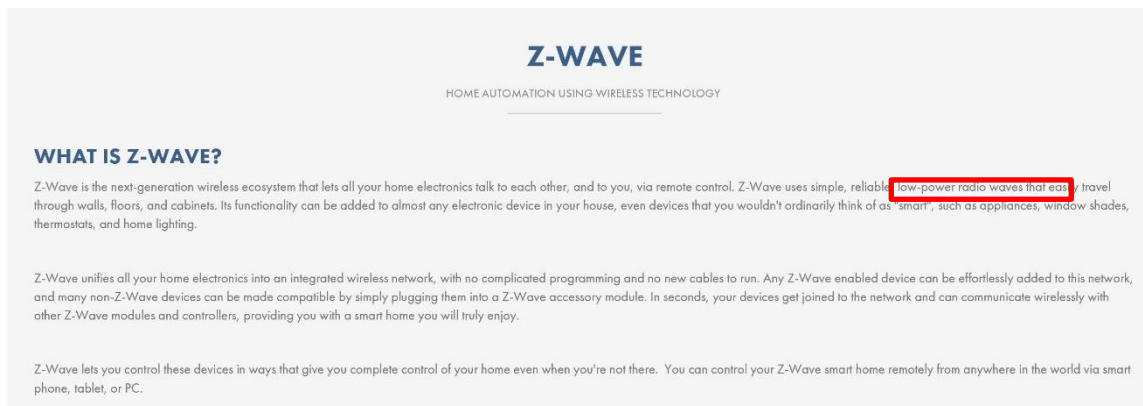
- Activate with your palm for keyless entry with the use of a unique PIN code that you can set.
- Lock and unlock your door remotely from your smartphone, tablet or PC.

<https://my-digitallife.att.com/learn/shop>).



Step 9. Install the Z-Wave module with the angled edge up; make sure it seats securely on the connector.

<https://my-digitallife.att.com/content/dam/Support/device-installation/Door%20Lock%20Quick%20Install%20Guide.pdf>).



<http://www.zwaveproducts.com/learn/Z-Wave>).

21. Each Accused Instrumentality has an appliance interface for communicating with the at least one local appliance (*e.g.*, an interface which connects and makes possible the transmission of a signal to the actual electrical appliance like light, lock, switch). For example, the Light Plug communicates with the appliance plugged into the outlet, the Light Switch/Dimmer communicates with the connected light, and Thermostat communicates with the HVAC unit. (*Supra* ¶20).

22. Each Accused Instrumentality has a microcomputer connected between the satellite radio transceiver (*e.g.*, Z-Wave transceiver) and the appliance interface and having first program instructions for controlling the satellite transceiver (*e.g.*, the microcontroller controls the transmission of signals from the transceiver to the other Z-Wave nodes in the network), and second program instructions for directing communication between the satellite transceiver and the appliance interface (*e.g.*, the microcontroller within the Z-Wave device enables the command received from the primary controller by the Z-Wave transceiver to be communicated to the appliance interface of the device so that the intended action can be executed such as switch on/off a light or plugged in device, control temperature, dim a light). (*Supra* ¶20; <https://standards.ieee.org/getieee802/download/802.15.4-2011.pdf>).

## Third-Party Products Work Too

The Samsung SmartCam HD Pro isn't the only third-party device that you can use with your Digital Life security system. AT&T also has partnerships with Lutron and Sengled. Both companies focus on light automation. Using your Digital Life app, you can automate your Sengled Element light bulb or your Lutron Caseta Wireless products including the plug-in lamp dimmer, in-wall dimmer, and Serena motorized shades. Connecting Lutron products to your Digital Life system requires the purchase of a Lutron Caseta Wireless Smart Bridge.

- Full Home Automation
- Video Surveillance
- iOS, Android, Windows Phone, and Blackberry
- Text & Email Alerts
- Z-Wave Communication

(<https://homealarmreport.com/att-digital-life-review/>).



Z-Wave's physical and media access layers (PHY/MAC) have been ratified by the International Telecommunication Union (ITU) as the international standard (G.9959). The Z-Wave Standard is administered by the Z-Wave Alliance which serves as the Standards Development Organization (SDO) for Z-Wave.

Together, Sigma Designs, the Z-Wave Alliance and the over 450 international companies that use Z-Wave technology in their products and services present the largest ecosystem of interoperable wireless control products in the world. The Z-Wave mesh communication protocol stack is embedded in the available chips and modules, and is accessed through a complete set of APIs. Z-Wave chips and modules provide Flash or OTP memory options for the manufacturer or OEM's application software.

For many products, the Z-Wave chip or module, with its on-board micro-controller, is all that is needed for a complete Z-Wave solution. For companies that choose chip-based over module-based solutions, a range of blueprints of the PCB

circuitry surrounding the Z-Wave Single Chip is offered, including antenna circuitry and filters. Sigma Designs also licenses reference designs, stack software and APIs to chip manufacturers that are interested in entering the wireless control space, providing Z-Wave porting services that assure quality and accelerate product development. Z-Wave's industry-leading device specifications are available royalty free, based on a RAND model. The Z-Wave certification program ensures interoperability between all products.

(<https://Z-Wavealliance.org/Z-Wave-oems-developers/>).



The Version Command Class, version 2 is extended to report the version of various firmware images such as a host processor firmware, etc. in addition to the firmware image running in the Z-Wave chip.

As an example, one may construct a product comprising a Z-Wave chip and a secondary host processor that maintains a security certificate. With Firmware Update Meta Data Command Class, version 3 the Z-Wave chip, the host processor and the security certificate may all be updated via individual firmware IDs. Version 2 of the Version Command Class (this Command Class) allows a controlling node to request the corresponding version information for each firmware ID.

Commands not mentioned here remain the same as specified for Version Command Class, version 1.

#### 4.20.1 Version Report Command

This command is used to report the library type, protocol version and application version from a node.

Version 2 of this command renames the fields Application Version and Application Sub Version to Firmware 0 Version and Firmware 0 Sub Version. The use remains the same.

A node MUST advertise the version of all firmware images which can be updated via the Firmware Update Command Class.

A one-chip system MUST comply with the following:

- The Firmware 0 Version MUST reflect the complete firmware implementing the Z-Wave protocol stack as well as the Z-Wave application.

A multi-processor system MUST comply with the following:

- The Firmware 0 Version MUST reflect the firmware implementing the Z-Wave protocol stack and the inter-chip interface module that enables the Z-Wave application to run in the host processor. Another firmware number (e.g. Firmware 1) version MUST reflect the Z-Wave application that runs in the host processor. Any firmware number larger than 0 MAY be used for this purpose.

[http://zwavepublic.com/sites/default/files/command\\_class\\_specs\\_2017A/SDS13782-4%20Z-Wave%20Management%20Command%20Class%20Specification.pdf](http://zwavepublic.com/sites/default/files/command_class_specs_2017A/SDS13782-4%20Z-Wave%20Management%20Command%20Class%20Specification.pdf)

23. Each Accused Instrumentality provides first program instructions including detecting communications directed by the headend computer (*e.g.*, primary controller, in this case Digital Life control panel) relative to the same appliance controller (*e.g.*, targeted Z-Wave node), signaling receipt of the directed communications (*e.g.*, sending acknowledgement signal through the Z-Wave transceiver), and directing communications to the headend computer relative to the same appliance controller (*e.g.*, sending status of an appliance or signal from a connected sensor). For example, the Digital Life control panel can send/receive messages to program various connected Z-Wave devices; the Z-Wave outlet can receive communications to turn on or off appliances or can communicate regarding the status of the appliance; the Z-Wave Dimmer/Switch can receive communications to program connected lighting sources or

communicate regarding the status of the switch. (*Supra* ¶20; <https://standards.ieee.org/getieee802/download/802.15.4-2011.pdf>).

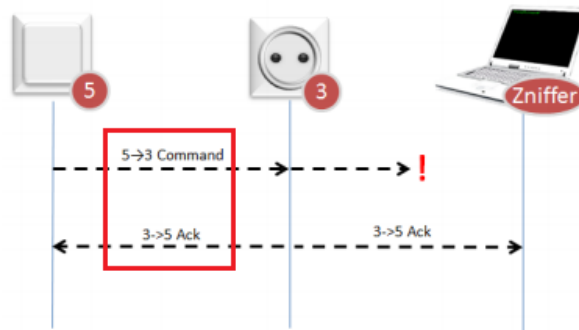
24. Each Accused Instrumentality has a second program instructions including detecting relay communications directed between the headend computer and a different relay unit, transmitting the relay communications, detecting a reply communication from the different relay unit, and transmitting the reply communication to the headend computer, wherein at least some of the relay units communicate with the headend computer by relay communications using at least two others of the relay units (*e.g.*, a Z-Wave node detects messages from primary controller and checks whether message is intended for itself, if not, then acting as a repeater, transmits it to next intended device in the route; the Z-Wave node detects messages from another Z-Wave node and forwards it to primary controller). The Accused Instrumentality works on Z-Wave technology which uses mesh network and would communicate with the headend computer by relay communications using at least two others of the relay units (*e.g.*, repeaters). (*Supra* ¶20; <https://standards.ieee.org/getieee802/download/802.15.4-2011.pdf>; <https://www.zwaveproducts.com/learn/ask-an-expert/glossary/mesh-network>; <http://docslide.us/documents/Z-Wave-technical-basics-small.html>; <http://www.zwaveproducts.com/learn/Z-Wave>).

Each frame carries a checksum. A Receiving node can verify the frame integrity thanks to this checksum. Invalid frames are discarded.

A Receiving node returns an Ack message in order to confirm that the frame has been received. If no Ack is received by the Sending node, it must assume that the transmission failed. The Sending node will then retransmit the same message until it gets feedback from the Receiving node. After three unsuccessful transmissions, the Sending node will consider the link to be down.

Ack messages are sent to confirm the frame integrity and do not imply that the Receiving node has understood or executed the command.

Local differences in wireless link quality may cause a Z-Wave network analyzer (known as a Zniffer) not to see the same transmissions as nodes participating in a transmission.



Example 3: Network analysis issues

(<http://zwavepublic.com/sites/default/files/APL13031-2%20-%20Z-Wave%20Networking%20Basics.pdf>).

This command is used to set the network route to use when sending commands to the specified NodeID.

The use of this command is NOT RECOMMENDED.

7	6	5	4	3	2	1	0
COMMAND_CLASS = NETWORK_MANAGEMENT_INSTALLATION_MAINTENANCE							
COMMAND = PRIORITY_ROUTE_SET							
NodeID							
Repeater 1 [First repeater]							
Repeater 2							
Repeater 3							
Repeater 4 [Last repeater]							
Speed							

**NodeID (1 byte)**

This field is used to specify the destination NodeID for which a last working route MUST be set.

**Repeater (4 bytes)**

This field is used to specify repeaters for the route. Each byte represents a NodeID and the first field (Repeater 1) is the first repeater of the route.

The value 0x00 MUST indicate that the byte does not represent a repeater. If the route is shorter than four repeaters, unused repeaters fields MUST be set to 0x00. If Repeater 1 is set to 0x00, it means that the Last Working Route is direct (nodes are within direct reach).

([http://zwavepublic.com/sites/default/files/command\\_class\\_specs\\_2017A/SDS13784-4%20Z-](http://zwavepublic.com/sites/default/files/command_class_specs_2017A/SDS13784-4%20Z-)

[Wave%20Network-Protocol%20Command%20Class%20Specification.pdf](#)).

The Z-Wave Protocol handles transmissions to destinations all over the network. If necessary, other nodes are used as repeaters. This is called routing.

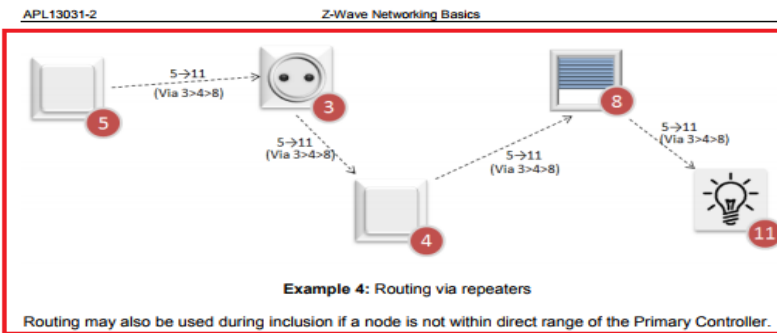
During bootstrapping, the Primary Controller asks the new node to discover its neighbors. Thanks to the neighbor nodes information, the Primary Controller builds a network map and knows the different possible routes to reach a node.

When using repeaters, the Sending node includes the route information in the frame. Each repeater parses the routing information and forwards the frame accordingly.

Sigma Designs Inc.

Z-Wave Networking Basics

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<http://zwavepublic.com/sites/default/files/APL13031-2%20-%20Z-Wave%20Networking%20Basics.pdf>).

25. **Indirect Infringement.** Upon information and belief, Defendant has been indirectly infringing by way of inducing infringement of at least claim 1 of the ‘166 patent in the Eastern District of Texas and Texas, and elsewhere in the United States, by providing to customers Defendant’s Accused Instrumentalities for use as appliance controllers as described above. (E.g., <https://homealarmreport.com/att-digital-life-review/>; <https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf>; <https://my-digitallife.att.com/learn/explore-home-automation>; <https://my-digitallife.att.com/learn/shop>; <https://my-digitallife.att.com/content/dam/Support/device-installation/Indoor%20Smart%20Plug.pdf>; [20](https://my-</a></p>
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[installation/Door%20Lock%20Quick%20Install%20Guide.pdf](https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf);

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[digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-](https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf)

[updated.pdf](https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf)). Upon information and belief, Defendant had actual knowledge of the '166 patent since at least the date when it was served with the original Complaint in this action and has known of its infringement since at least that date. Upon information and belief, Defendant has known that the use of the Accused Instrumentalities by its customers infringed at least claim 1 of the '166 patent since at least the date the Complaint was filed in this action. Despite this knowledge, Defendant continued to encourage, induce, and specifically intend for its customers to use the Accused Instrumentalities to infringe as described above, and provided instructions for using the Accused Instrumentalities to infringe, including advertising descriptions of the features, providing help pages, and/or user's guides. Defendant is a direct and indirect infringer, and its customers using the Accused Instrumentalities are direct infringers. Defendant therefore committed the act of inducing infringement by specifically intending to induce infringement by providing the Accused Instrumentalities to its customers and by aiding and abetting their use in a manner known to infringe by Defendant.

26. On information and belief, since Defendant became aware of the infringement at least as of the date of the Complaint was filed in this action, Defendant has committed the act of contributory infringement by intending to provide the identified Accused Instrumentality to its customers knowing that they are a material part of the invention, knowing that their use was made and adapted for infringement of the '166 patent, and further knowing that the apparatuses are not a staple article or commodity of commerce suitable for substantially noninfringing use. As described above, Defendant was aware that all material claim limitations are satisfied by the

use and implementation of the Accused Instrumentalities by Defendant's customers yet continued to provide the Accused Instrumentalities to its customers knowing that they are a material part of the invention. As described above, since learning of the infringement, Defendant knew that the use and implementation of the Accused Instrumentalities by its customers was made and adapted for infringement of the '166 patent. A new act of direct infringement occurred each time a customer implemented and/or used the Accused Instrumentalities. After Defendant became aware that the use of the Accused Instrumentalities infringes at least one claim of the '166 patent, Defendant knew that each such new use was made and adapted for infringement of at least one claim of the '166 patent and Defendant continued to advertise and provide the Accused Instrumentalities for such infringing activities. Furthermore, as described more fully above, the Accused Instrumentalities are apparatuses designed to satisfy each and every limitation of claim 1 of the '166 patent and are not staple articles or commodities of commerce suitable for substantially noninfringing use.

**III. COUNT II**  
**(PATENT INFRINGEMENT OF UNITED STATES PATENT NO. 6,873,245)**

27. Plaintiff incorporates the above paragraphs herein by reference.

28. On March 29, 2005, United States Patent No. 6,873,245 ("the '245 Patent") was duly and legally issued by the United States Patent and Trademark Office. The application leading to the '245 patent was filed on August 14, 2001, and is a continuation-in-part of the application leading to the '166 Patent. (Ex. B at cover). The '245 Patent is titled "RF Remote Appliance Control/Monitoring System." A true and correct copy of the '245 Patent is attached hereto as Exhibit B and incorporated herein by reference.

29. Plaintiff is the assignee of all right, title and interest in the '245 patent, including all rights to enforce and prosecute actions for infringement and to collect damages for all

relevant times against infringers of the '245 Patent. Accordingly, Plaintiff possesses the exclusive right and standing to prosecute the present action for infringement of the '245 Patent by Defendant.

30. Because the '245 patent is a continuation in part of the application leading to the '166 patent, the '245 patent has a substantially overlapping specification and the background regarding the '166 patent is equally applicable and is incorporated by reference with respect to the '245 patent. (*Supra* ¶¶11-17).

31. **Direct Infringement.** Upon information and belief, Defendant has been directly infringing at least claim 1 of the '245 patent in the Eastern District of Texas and Texas, and elsewhere in the United States, by performing actions comprising making, using, selling, and offering for sale an appliance controller for a distributed appliance systems having a multiplicity of appliances, and a plurality of relay units, that satisfies the limitations of at least claim 1, including without limitation the Digital Life Control Panel, Light Plug and Appliance Module, Smart Thermostat, Light Switch, Garage Door Controller, and Door Lock (“Accused Instrumentality”). Karamelion incorporates by reference the PR 3-1 infringement contentions that it served on Defendant in this case.

32. Each Accused Instrumentality provides an appliance controller (*e.g.*, a Z-Wave Controller, in this case a Digital Life Light Plug and Appliance Module, Smart Thermostat, Light Switch, Garage Door Controller, and Door Lock) for a distributed appliance system (*e.g.*, Z-Wave network) having a multiplicity of appliances (*e.g.*, appliances such as lights, fans, HVAC, garage door), and a plurality of relay units (*e.g.*, repeaters), one of the relay units being the appliance controller (*e.g.*, a Z-wave Controller). (*Supra* ¶20; [http://zwavepublic.com/sites/default/files/command\\_class\\_specs\\_2017A/SDS13782-4%20Z-](http://zwavepublic.com/sites/default/files/command_class_specs_2017A/SDS13782-4%20Z-)

[Wave%20Management%20Command%20Class%20Specification.pdf;](#)

<http://zwavepublic.com/sites/default/files/APL13031-2%20-%20Z->

[Wave%20Networking%20Basics.pdf;](#) [https://homealarmreport.com/att-digital-life-review/;](https://homealarmreport.com/att-digital-life-review/)

[https://my-digitallife.att.com/learn/explore-home-automation\)](https://my-digitallife.att.com/learn/explore-home-automation)

33. Each Accused Instrumentality has a low power satellite radio transceiver (*e.g.*, radio frequency transceivers within the various Z-Wave devices) having a range being less than a distance to at least some of the appliances. (*Supra* ¶20).

34. Each Accused Instrumentality has an appliance interface for communicating with the at least one local appliance (*e.g.*, an interface which connects and makes possible the transmission of signal to the actual electrical appliance like light, fans, HVAC, garage door). (*Supra* ¶20).

35. Each Accused Instrumentality has a microcomputer (*e.g.*, microcontroller) connected between the satellite radio transceiver (*e.g.*, Z-Wave transceiver) and the appliance interface and having first program instructions for controlling the satellite transceiver (*e.g.*, the microcontroller controls the transmission of signals from the transceiver to the other Z-Wave nodes in the network) and second program instructions for directing communication between the satellite transceiver and the appliance interface (*e.g.*, the microcontroller within the Z-Wave device enables the command received from the appliance interface to be communicated to the local appliance by the Z-Wave transceiver so that the intended action can be executed such as switch on/off a light, control temperature, dim a light). (*Supra* ¶¶20, 22; [https://Z-Wavealliance.org/Z-Wave-oems-developers/;](https://Z-Wavealliance.org/Z-Wave-oems-developers/)

[http://zwavepublic.com/sites/default/files/command\\_class\\_specs\\_2017A/SDS13782-4%20Z-](http://zwavepublic.com/sites/default/files/command_class_specs_2017A/SDS13782-4%20Z-)



[Wave%20Management%20Command%20Class%20Specification.pdf](#); <http://www.rfwireless-world.com/Tutorials/Z-Wave-physical-layer.html>).

36. Each Accused Instrumentality has a first program instructions including detecting communications directed by another of the relay units (*e.g.*, another Z-Wave node acting as a repeater) relative to the same appliance controller (*e.g.*, targeted Z-Wave node), signaling receipt of the directed communications (sending acknowledgement signal through the Z-Wave transceiver), and directing communications to the other of the relay units relative to the same appliance controller (*e.g.*, sending status of an appliance or signal from a connected sensor). For example, the Digital Life control panel can send/receive messages to program various connected Z-Wave devices through other Z-Wave devices in the network acting as repeaters; the Z-Wave outlet can receive communications to turn on or off appliances or can communicate regarding the status of the appliance; the Z-Wave Dimmer/Switch can receive communications to program connected lighting sources or communicate regarding the status of the switch. (*Supra* ¶20; <http://zwavepublic.com/sites/default/files/APL13031-2%20-%20Z-Wave%20Networking%20Basics.pdf>; [http://zwavepublic.com/sites/default/files/command\\_class\\_specs\\_2017A/SDS13784-4%20Z-Wave%20Network-Protocol%20Command%20Class%20Specification.pdf](http://zwavepublic.com/sites/default/files/command_class_specs_2017A/SDS13784-4%20Z-Wave%20Network-Protocol%20Command%20Class%20Specification.pdf)).

37. Each Accused Instrumentality has a second program instructions including detecting relay communications directed between the another of the relay units and a different relay unit, transmitting the relay communications, detecting a reply communication from the different relay unit, and transmitting the reply communication to the other of the relay units, wherein at least some of the relay units communicate with others of the relay units by relay communications using at least two others of the relay units (*e.g.*, a Z-Wave node detects

messages from primary controller and checks whether message is intended for itself, if not, then acting as a repeater, transmits it to next intended device in the route. Also, the Z-Wave node detects messages from another Z-Wave node and forwards it to primary controller. N number of nodes may be involved in the process acting as repeaters or relay units). The Accused Instrumentality work on Z-Wave technology which uses mesh network and would communicate with the other relay units by relay communications using at least two others of the relay units (e.g., repeaters). (*Supra* ¶¶20, 24; <http://zwavepublic.com/sites/default/files/APL13031-2%20-%20Z-Wave%20Networking%20Basics.pdf>; [http://zwavepublic.com/sites/default/files/command\\_class\\_specs\\_2017A/SDS13784-4%20Z-Wave%20Network-Protocol%20Command%20Class%20Specification.pdf](http://zwavepublic.com/sites/default/files/command_class_specs_2017A/SDS13784-4%20Z-Wave%20Network-Protocol%20Command%20Class%20Specification.pdf); <https://www.zwaveproducts.com/learn/ask-an-expert/glossary/mesh-network>; <http://docslide.us/documents/Z-Wave-technical-basics-small.html>; <http://www.zwaveproducts.com/learn/Z-Wave>).

38. **Indirect Infringement.** Upon information and belief, Defendant has been indirectly infringing by way of inducing infringement of at least claim 1 of the '245 patent in the Eastern District of Texas and Texas, and elsewhere in the United States, by providing to customers Defendant's Accused Instrumentalities for use as appliance controllers as described above. (E.g., <https://homealarmreport.com/att-digital-life-review/>; <https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf>; <https://my-digitallife.att.com/learn/explore-home-automation>; <https://my-digitallife.att.com/learn/shop>; <https://my-digitallife.att.com/content/dam/Support/device-installation/Indoor%20Smart%20Plug.pdf>; [26](https://my-digitallife.att.com/content/dam/Support/device-</a></p>
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[installation/Door%20Lock%20Quick%20Install%20Guide.pdf;](https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf) [https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-](https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf)

[updated.pdf](https://my-digitallife.att.com/content/dam/Support/PDFs/ATT-UM-V3-2015-FINAL-01.30.2015-updated.pdf)). Upon information and belief, Defendant had actual knowledge of the '245 patent since at least the date when it was served with the original Complaint in this action and has known of its infringement since at least that date. Upon information and belief, Defendant has known that the use of the Accused Instrumentalities by its customers infringed at least claim 1 of the '245 patent since at least the date the Complaint was filed in this action. Despite this knowledge, Defendant continued to encourage, induce, and specifically intend for its customers to use the Accused Instrumentalities to infringe as described above, and provided instructions for using the Accused Instrumentalities to infringe, including advertising descriptions of the features, providing help pages, and/or user's guides. Defendant is a direct and indirect infringer, and its customers using the Accused Instrumentalities are direct infringers. Defendant therefore committed the act of inducing infringement by specifically intending to induce infringement by providing the Accused Instrumentalities to its customers and by aiding and abetting their use in a manner known to infringe by Defendant.

39. On information and belief, since Defendant became aware of the infringement at least as of the date of the Complaint was filed in this action, Defendant has committed the act of contributory infringement by intending to provide the identified Accused Instrumentality to its customers knowing that they are a material part of the invention, knowing that their use was made and adapted for infringement of the '245 patent, and further knowing that the apparatuses are not a staple article or commodity of commerce suitable for substantially noninfringing use. As described above, Defendant was aware that all material claim limitations are satisfied by the use and implementation of the Accused Instrumentalities by Defendant's customers yet

continued to provide the Accused Instrumentalities to its customers knowing that they are a material part of the invention. As described above, since learning of the infringement, Defendant knew that the use and implementation of the Accused Instrumentalities by its customers was made and adapted for infringement of the '245 patent. A new act of direct infringement occurred each time a customer implemented and/or used the Accused Instrumentalities. After Defendant became aware that the use of the Accused Instrumentalities infringes at least one claim of the '245 patent, Defendant knew that each such new use was made and adapted for infringement of at least one claim of the '245 patent and Defendant continued to advertise and provide the Accused Instrumentalities for such infringing activities. Furthermore, as described more fully above, the Accused Instrumentalities are apparatuses designed to satisfy each and every limitation of claim 1 of the '245 patent and are not staple articles or commodities of commerce suitable for substantially noninfringing use.

40. Plaintiff has been damaged as a result of Defendant's infringing conduct. Defendant is thus liable to Plaintiff for damages in an amount that adequately compensates Plaintiff for such Defendant's infringement of the '166 Patent and the '245 Patent, *i.e.*, in an amount that by law cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

41. On information and belief, Defendant has had at least constructive notice of the '166 Patent and the '245 Patent by operation of law, and there are no marking requirements that have not been complied with.

#### **IV. JURY DEMAND**

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

#### **V. PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests that the Court find in its favor and against Defendant, and that the Court grant Plaintiff the following relief:

- a. Judgment that one or more claims of United States Patent No. 6,275,166 have been directly and indirectly infringed, either literally and/or under the doctrine of equivalents, by Defendant;
- b. Judgment that one or more claims of United States Patent No. 6,873,245 have been directly and indirectly infringed, either literally and/or under the doctrine of equivalents, by Defendant;
- c. Judgment that Defendant account for and pay to Plaintiff all damages to and costs incurred by Plaintiff because of Defendant's infringing activities and other conduct complained of herein;
- d. That Plaintiff be granted pre-judgment and post-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;
- g. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: May 10, 2019

Respectfully submitted,

/s/ David R. Bennett

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e-mail: [dbennett@directionip.com](mailto:dbennett@directionip.com)

**ATTORNEY FOR PLAINTIFF  
KARAMELION LLC**

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a true and correct copy of the above and foregoing document has been served on May 10, 2019 to all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system per Local Rule CV-5(a)(3).

*/s/David R. Bennett* \_\_\_\_\_

David R. Bennett