

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT7417047

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| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                                          |                       |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                                              |                       |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                                                         |                       |
|                                                                                                                                                                                                 | <b>Name</b>                                             | <b>Execution Date</b> |
|                                                                                                                                                                                                 | TYCO FIRE & SECURITY GMBH                               | 09/27/2018            |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                                                         |                       |
| <b>Name:</b>                                                                                                                                                                                    | JOHNSON CONTROLS FIRE PROTECTION LP                     |                       |
| <b>Street Address:</b>                                                                                                                                                                          | 1501 YAMATO ROAD                                        |                       |
| <b>City:</b>                                                                                                                                                                                    | BOCA RATON                                              |                       |
| <b>State/Country:</b>                                                                                                                                                                           | FLORIDA                                                 |                       |
| <b>Postal Code:</b>                                                                                                                                                                             | 33431                                                   |                       |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                                                         |                       |
|                                                                                                                                                                                                 | <b>Property Type</b>                                    | <b>Number</b>         |
|                                                                                                                                                                                                 | Application Number:                                     | 16477663              |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                                                         |                       |
| <b>Fax Number:</b>                                                                                                                                                                              |                                                         |                       |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |                                                         |                       |
| <b>Email:</b>                                                                                                                                                                                   | patentdocket@arentfox.com, brianna.nesmith@arentfox.com |                       |
| <b>Correspondent Name:</b>                                                                                                                                                                      | ARENTFOX SCHIFF LLP                                     |                       |
| <b>Address Line 1:</b>                                                                                                                                                                          | 1717 K STREET, NW                                       |                       |
| <b>Address Line 4:</b>                                                                                                                                                                          | WASHINGTON, D.C. 20006                                  |                       |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | 039636.06445/FDW00161WOUS                               |                       |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | BRIANNA NESMITH                                         |                       |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Brianna Nesmith/                                       |                       |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 07/06/2022                                              |                       |
| <b>Total Attachments: 41</b>                                                                                                                                                                    |                                                         |                       |
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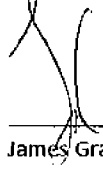
## **Exhibit A | Assignment of Patent Rights**

Tyco Fire & Security GmbH, a Swiss limited liability company registered under the number CHE-469.016.289, whose registered office is at Victor von Bruns-Strasse 21, 8212 Neuhausen am Rheinfall, Switzerland ("Transferor"), hereby assigns and transfers all of its right, title and interest in the attached patents and patent applications, including all rights of priority and continuation, divisional, reissue, reexamination, renewal, extensions, substitute, and other filings in any country, and including the rights to recover all damages for infringements including damages by reason of past, present, or future infringement or any other violation of patent or patent application rights and the rights to enforce them in relation to infringements occurring before or after the effective date of this assignment, in any country and in any court, and including the right to bring, make, oppose, defend, appeal proceedings, claims or actions in any court anywhere in the world and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership of any of the attached patents and patent applications (including without limitation all divisional and other filings in any country) whether occurring before, on or after the effective date of this assignment, in consideration of Ten Dollars (\$10.00), and other good and valuable compensation, the receipt of which is hereby acknowledged, to Johnson Controls Fire Protection LP (formerly SimplexGrinnell LLC), a limited partnership organized under the laws of the State of Delaware, with its registered office at 1501 Yamato Road, Boca Raton, Florida 33431, United States of America ("Transferee"), and hereby authorizes Transferee to record or have recorded the assignment/transfer of such rights with the relevant patent offices and authorities, including the change of ownership.

*[Signatures on the Next Page]*

Date: September 27, 2018

**TYCO FIRE & SECURITY GmbH**

A handwritten signature in black ink, appearing to be 'James Graham', written over a horizontal line.

James Graham  
Managing Director

**Johnson Controls Fire Protection LP**

\_\_\_\_\_  
Michael R. Peterson  
Vice President

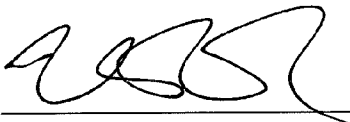
Date: September 27, 2018

**TYCO FIRE & SECURITY GmbH**

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James Graham  
Managing Director

**Johnson Controls Fire Protection LP**



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Michael R. Peterson  
Vice President

# **ASSIGNED PATENTS AND PATENT APPLICATIONS:**

| CaseNumber | Official Title                                                                               | Country Name             | Business Unit | Status    | Application # | Filing Date | Patent # | Issue Date  |
|------------|----------------------------------------------------------------------------------------------|--------------------------|---------------|-----------|---------------|-------------|----------|-------------|
| 20250      | WALK THROUGH TEST SYSTEM                                                                     | Canada                   | WESTMIN       | Expired   | 516040        | 15-Aug-1986 | 1269140  | 15-May-1990 |
| 20250      | WALK THROUGH TEST SYSTEM                                                                     | United States of America | WESTMIN       | Expired   | 06/775854     | 13-Sep-1985 | 4725818  | 16-Feb-1988 |
| 20251      | MONITOR/CONTROL COMMUNICATION NET WITH INTELLIGENT PERIPHERALS                               | United States of America | WESTMIN       | Expired   | 06/741096     | 04-Jan-1985 | 4796025  | 03-Jan-1989 |
| 20252      | ALARM CONDITION DETECTING METHOD AND APPARATUS                                               | Canada                   | WESTMIN       | Expired   | 2042247       | 09-May-1991 | 2042247  | 31-Aug-1999 |
| 20252      | ALARM CONDITION DETECTING METHOD AND APPARATUS                                               | United States of America | WESTMIN       | Expired   | 07/525281     | 17-May-1990 | 5155468  | 13-Oct-1992 |
| 20253      | APPARATUS AND METHOD FOR MULTIPLEXING MULTIPLE DATA AND ANALOG VALUES IN PERIPHERAL DEVICE   | Canada                   | WESTMIN       | Expired   | 2051065       | 10-Sep-1991 | 2051065  | 18-Jan-2000 |
| 20253      | APPARATUS AND METHOD FOR MULTIPLEXING MULTIPLE DATA AND ANALOG VALUES IN A PERIPHERAL DEVICE | United States of America | WESTMIN       | Expired   | 07/689401     | 22-Apr-1991 | 5173683  | 22-Dec-1992 |
| 20254      | FIRE ALARM HEAT DETECTOR                                                                     | United States of America | WESTMIN       | Expired   | 08/118116     | 07-Sep-1993 | 5450066  | 12-Sep-1995 |
| 20255      | FIRE ALARM SYSTEM WITH SENSITIVITY ADJUSTMENT                                                | United States of America | WESTMIN       | Expired   | 08/150696     | 10-Nov-1993 | 5552763  | 03-Sep-1996 |
| 20256      | SYNCHRONIZED STROBE ALARM SYSTEM                                                             | United States of America | WESTMIN       | Expired   | 08/591902     | 25-Jan-1996 | 5559492  | 24-Sep-1996 |
| 20256      | SYNCHRONIZED STROBE ALARM SYSTEM                                                             | United States of America | WESTMIN       | Abandoned | 08/126791     | 24-Sep-1993 |          |             |
| 20257      | EMERGENCY STROBE LIGHT                                                                       | United States of America | WESTMIN       | Expired   | 08/840806     | 16-Apr-1997 | 5865527  | 02-Feb-1999 |
| 20257      | EMERGENCY STROBE LIGHT                                                                       | United States of America | WESTMIN       | Expired   | 08/537413     | 10-Oct-1995 | 5622427  | 22-Apr-1997 |
| 20258      | SMOKE/FIRE DETECTOR                                                                          | United States of America | WESTMIN       | Expired   | 08/764757     | 12-Dec-1996 | 5808556  | 15-Sep-1998 |

|       |                                                                                   |                          |         |           |           |             |         |             |
|-------|-----------------------------------------------------------------------------------|--------------------------|---------|-----------|-----------|-------------|---------|-------------|
| 20258 | SMOKE/FIRE DETECTOR                                                               | United States of America | WESTMIN | Expired   | 08/511019 | 03-Aug-1995 | 5710541 | 20-Jan-1998 |
| 20259 | SMOKE DETECTOR HOUSING FOR IMPROVED SMOKE COLLECTION                              | United States of America | WESTMIN | Expired   | 08/684947 | 19-Jul-1996 | 5751218 | 12-May-1998 |
| 20260 | EARLY FIRE DETECTION USING TEMPERATURE AND SMOKE TESTING                          | United States of America | WESTMIN | Expired   | 09/165485 | 02-Oct-1998 | 6195011 | 27-Feb-2001 |
| 20260 | EARLY FIRE DETECTION USING TEMPERATURE AND SMOKE TESTING                          | United States of America | WESTMIN | Expired   | 08/677339 | 02-Jul-1996 | 5818326 | 06-Oct-1998 |
| 20261 | ADDRESSABLE DEVICES WITH INTERFACE MODULES HAVING ELECTRICALLY READABLE ADDRESSES | United States of America | WESTMIN | Abandoned | 08/383069 | 03-Feb-1995 | 5818334 | 06-Oct-1998 |
| 20262 | REDUNDANT (VIDEO) ALARM MONITORING SYSTEM                                         | United States of America | WESTMIN | Abandoned | 09/132972 | 12-Aug-1998 | 6038289 | 14-Mar-2000 |
| 20262 | REDUNDANT (VIDEO) ALARM MONITORING SYSTEM                                         | United States of America | WESTMIN | Abandoned | 08/712980 | 12-Sep-1996 | 5862201 | 19-Jan-1999 |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                   | United States of America | WESTMIN | Abandoned | 10/799445 | 12-Mar-2004 |         |             |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                   | United States of America | WESTMIN | Abandoned | 10/890817 | 14-Jul-2004 |         |             |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                   | United States of America | WESTMIN | Abandoned | 10/948092 | 23-Sep-2004 |         |             |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                   | United States of America | WESTMIN | Abandoned | 11/077960 | 11-Mar-2005 |         |             |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                   | United States of America | WESTMIN | Abandoned | 11/132636 | 19-May-2005 |         |             |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                   | United States of America | WESTMIN | Abandoned | 11/243471 | 04-Oct-2005 |         |             |

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|-------|-------------------------------------------------------|--------------------------------|---------|-----------|-----------|---------------------|---------|---------------------|
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 11/318328 | 23-<br>Dec-<br>2005 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 11/396296 | 31-<br>Mar-<br>2006 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 11/522064 | 15-<br>Sep-<br>2006 |         |                     |
| 20263 | Building Alarm System with<br>Synchronized Strobos    | United<br>States of<br>America | WESTMIN | Abandoned | 11/598539 | 13-<br>Nov-<br>2006 |         |                     |
| 20263 | Building Alarm System with<br>Synchronized Strobos    | United<br>States of<br>America | WESTMIN | Abandoned | 11/732116 | 02-<br>Apr-<br>2007 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 11/805558 | 23-<br>May-<br>2007 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Expired   | 08/682140 | 17-<br>Jul-<br>1996 | 5886620 | 23-<br>Mar-<br>1999 |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 09/709081 | 08-<br>Nov-<br>2000 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 10/040259 | 02-<br>Jan-<br>2002 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 10/211935 | 01-<br>Aug-<br>2002 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 10/352374 | 27-<br>Jan-<br>2003 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Abandoned | 10/642113 | 15-<br>Aug-<br>2003 |         |                     |
| 20263 | BUILDING ALARM SYSTEM<br>WITH SYNCHRONIZED<br>STROBES | United<br>States of<br>America | WESTMIN | Expired   | 10/719097 | 21-<br>Nov-<br>2003 | 7005971 | 28-<br>Feb-<br>2006 |



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|-------|-----------------------------------------------------------------------------------------|--------------------------|---------|-----------|-----------|-------------|---------|-------------|
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                         | United States of America | WESTMIN | Expired   | 10/719145 | 21-Nov-2003 | 6954137 | 11-Oct-2005 |
| 20263 | BUILDING ALARM SYSTEM WITH SYNCHRONIZED STROBES                                         | United States of America | WESTMIN | Expired   | 08/996567 | 14-Oct-1999 | 6741164 | 25-May-2004 |
| 20264 | METHOD AND APPARATUS FOR ADAPTING VOLTAGE CONTROL IN ALARM SYSTEMS                      | United States of America | WESTMIN | Expired   | 09/078996 | 14-May-1998 | 5966002 | 12-Oct-1999 |
| 20265 | SELF-ALIGNING ELECTRICAL CONNECTOR                                                      | United States of America | WESTMIN | Abandoned | 09/407118 | 27-Sep-1999 |         |             |
| 20265 | SELF-ALIGNING ELECTRICAL CONNECTOR                                                      | United States of America | WESTMIN | Expired   | 08/985723 | 05-Dec-1997 | 6033245 | 07-Mar-2000 |
| 20266 | METHOD OF APPARATUS FOR DETERMINING PROPER INSTALLATION OF ALARM DEVICES                | United States of America | WESTMIN | Granted   | 09/028384 | 24-Feb-1998 | 6034601 | 07-Mar-2000 |
| 20267 | METHOD AND APPARATUS FOR DETERMINING PROPER INSTALLATION OF ALARM DEVICES               | United States of America | WESTMIN | Granted   | 09/305419 | 05-May-1999 | 6459370 | 01-Oct-2002 |
| 20268 | FIBER-SYNC COMMUNICATIONS CHANNEL                                                       | United States of America | WESTMIN | Granted   | 09/289508 | 09-Apr-1999 | 6265971 | 24-Jul-2001 |
| 20269 | ALARM SYSTEM HAVING IMPROVED CONTROL OF NOTIFICATION APPLIANCES OVER COMMON POWER LINES | United States of America | WESTMIN | Granted   | 09/312108 | 14-May-1999 | 6281789 | 28-Aug-2001 |
| 20270 | ALARM SYSTEM HAVING IMPROVED COMMUNICATION                                              | United States of America | WESTMIN | Granted   | 11/499951 | 07-Aug-2006 | 7508303 | 24-Mar-2009 |
| 20270 | ALARM SYSTEM HAVING IMPROVED COMMUNICATION                                              | United States of America | WESTMIN | Granted   | 10/156891 | 28-May-2002 | 6693532 | 17-Feb-2004 |
| 20270 | ALARM SYSTEM HAVING IMPROVED COMMUNICATION                                              | United States of America | WESTMIN | Granted   | 10/755741 | 12-Jan-2004 | 7091847 | 15-Aug-2006 |

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|-------|--------------------------------------------------------------------------------------|--------------------------|---------|-----------|-----------|-------------|---------|-------------|
| 20270 | ALARM SYSTEM HAVING IMPROVED COMMUNICATION                                           | United States of America | WESTMIN | Granted   | 09/438560 | 10-Nov-1999 | 6426697 | 30-Jul-2002 |
| 20271 | FIRE CONTROL PANEL MONITORING FOR DEGRADATION OF WIRING INTEGRITY DURING ALARM STATE | United States of America | WESTMIN | Abandoned | 09/511944 | 24-Feb-2000 | 6567001 | 20-May-2003 |
| 20272 | ALARM SYSTEM WITH INDIVIDUAL ALARM INDICATOR TESTING                                 | United States of America | WESTMIN | Granted   | 09/047894 | 25-Mar-1998 | 6313744 | 06-Nov-2001 |
| 20272 | ALARM SYSTEM WITH INDIVIDUAL ALARM INDICATOR TESTING                                 | United States of America | WESTMIN | Abandoned | 10/703027 | 06-Nov-2003 | RE41871 | 26-Oct-2010 |
| 20273 | HEAT DETECTOR                                                                        | United States of America | WESTMIN | Expired   | 29/048797 | 22-Dec-1995 | D377460 | 21-Jan-1997 |
| 20274 | GRILLE FOR A SMOKE DETECTOR                                                          | United States of America | WESTMIN | Expired   | 29/048281 | 22-Dec-1995 | D383407 | 09-Sep-1997 |
| 20275 | SMOKE DETECTOR                                                                       | United States of America | WESTMIN | Expired   | 29/065600 | 30-Jan-1997 | D388352 | 30-Dec-1997 |
| 20275 | SMOKE DETECTOR                                                                       | United States of America | WESTMIN | Abandoned | 29/065582 | 30-Jan-1997 | D388351 | 30-Dec-1997 |
| 20275 | SMOKE DETECTOR                                                                       | United States of America | WESTMIN | Expired   | 29/065575 | 30-Jan-1997 | D392573 | 24-Mar-1998 |
| 20276 | PIVOTING TIME RECORDER                                                               | Japan                    | WESTMIN | Abandoned | 232234/96 | 02-Sep-1996 |         |             |
| 20276 | PIVOTING TIME RECORDER                                                               | United States of America | WESTMIN | Abandoned | 08/523074 | 31-Aug-1995 | 5761996 | 09-Jun-1998 |
| 20277 | DUAL-LINE TIME RECORDER                                                              | United States of America | WESTMIN | Abandoned | 08/465562 | 05-Jan-1995 | 5764250 | 09-Jun-1998 |
| 20279 | TIME RECORDER WITH CODE READER AND DATA STORAGE                                      | United States of America | WESTMIN | Abandoned | 08/541945 | 10-Oct-1995 | 5990915 | 23-Nov-1999 |
| 20280 | PROGRAMMABLE TIME RECORDER                                                           | Japan                    | WESTMIN | Abandoned | 1476896   | 05-Jan-1996 |         |             |
| 20280 | PROGRAMMABLE TIME RECORDER                                                           | United States of America | WESTMIN | Abandoned | 09/132422 | 11-Aug-1998 | 6061303 | 09-May-2000 |
| 20280 | PROGRAMMABLE TIME RECORDER                                                           | United States of America | WESTMIN | Abandoned | 08/368988 | 05-Jan-1995 | 5793707 | 11-Aug-1998 |
| 20281 | DYNAMIC WORKFORCE SCHEDULER                                                          | United States of America | WESTMIN | SOLD      | 60/163304 | 03-Nov-1999 |         |             |

|       |                                                              |                            |         |           |            |             |         |             |
|-------|--------------------------------------------------------------|----------------------------|---------|-----------|------------|-------------|---------|-------------|
| 20281 | DYNAMIC WORKFORCE SCHEDULER                                  | United States of America   | WESTMIN | SOLD      | 09/599016  | 21-Jun-2000 | 6823315 | 23-Nov-2004 |
| 20282 | METHOD AND SYSTEM FOR TRACKING TIME AND ATTENDANCE           | United States of America   | WESTMIN | SOLD      | 60/163432  | 03-Nov-1999 |         |             |
| 20282 | METHOD AND SYSTEM FOR TRACKING TIME AND ATTENDANCE           | United States of America   | WESTMIN | SOLD      | 09/524310  | 14-Mar-2000 | 7233919 | 19-Jun-2007 |
| 20283 | BUSINESS VOLUME AND WORKFORCE REQUIREMENTS FORECASTER ENGINE | United States of America   | WESTMIN | SOLD      | 60/214393  | 28-Jun-2000 |         |             |
| 20283 | BUSINESS VOLUME AND WORKFORCE REQUIREMENTS FORECASTER ENGINE | United States of America   | WESTMIN | SOLD      | 09/649122  | 28-Aug-2000 |         |             |
| 20284 | TIME STAMP                                                   | United States of America   | WESTMIN | Expired   | 29/033129  | 05-Jan-1995 | D368037 | 19-Mar-1996 |
| 20285 | ELECTRONICALLY CONTROLLED MULTI-TONE PERIPHERAL              | United States of America   | WESTMIN | Abandoned | 09/815247  | 22-Mar-2001 |         |             |
| 20286 | AMPLIFIER AND HEAT SINK CONFIGURATION                        | United States of America   | WESTMIN | Abandoned | 09/843535  | 25-Apr-2001 | 6452491 | 17-Sep-2002 |
| 20287 | SMOKE CHAMBER                                                | United States of America   | WESTMIN | Abandoned | 09/757081  | 09-Jan-2001 | 6778091 | 17-Aug-2004 |
| 20288 | WIRELESS WALK THROUGH TEST SYSTEM                            | United States of America   | WESTMIN | Abandoned | 11/195922  | 03-Aug-2005 | 7167088 | 23-Jan-2007 |
| 20288 | WALK THROUGH TEST SYSTEM                                     | United States of America   | WESTMIN | Granted   | 10/733979  | 11-Dec-2003 | 6950016 | 27-Sep-2005 |
| 20288 | WIRELESS WALK THROUGH TEST SYSTEM                            | United States of America   | WESTMIN | Granted   | 10/144161  | 10-May-2002 | 6737967 | 18-May-2004 |
| 20289 | SMOKE DETECTOR SHIELD                                        | United States of America   | WESTMIN | Expired   | 60/156258  | 27-Sep-1999 |         |             |
| 20289 | SMOKE DETECTOR SHIELD                                        | United States of America   | WESTMIN | Abandoned | 09/665253  | 19-Sep-2000 | 6543735 | 08-Apr-2003 |
| 20290 | MULTIWAVELENGTH SMOKE DETECTOR USING WHITE LIGHT LED         | Germany                    | WESTMIN | Abandoned | 04796854.0 | 09-May-2007 |         |             |
| 20290 | MULTIWAVELENGTH SMOKE DETECTOR USING WHITE LIGHT LED         | European Patent Convention | WESTMIN | Abandoned | 04796854.0 | 09-May-2007 |         |             |

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|-------|-------------------------------------------------------------------------------------------------------|---------------------------------|---------|-----------|-----------------|---------------------|---------|---------------------|
| 20290 | MULTIWAVELENGTH<br>SMOKE DETECTOR USING<br>WHITE LIGHT LED                                            | France                          | WESTMIN | Abandoned | 04796854.0      | 09-<br>May-<br>2007 |         |                     |
| 20290 | MULTIWAVELENGTH<br>SMOKE DETECTOR USING<br>WHITE LIGHT LED                                            | United<br>States of<br>America  | WESTMIN | Expired   | 60/502339       | 12-<br>Sep-<br>2003 |         |                     |
| 20290 | MULTIWAVELENGTH<br>SMOKE DETECTOR USING<br>WHITE LIGHT LED                                            | United<br>States of<br>America  | WESTMIN | Granted   | 11/796008       | 26-<br>Apr-<br>2007 | 7474227 | 06-<br>Jan-<br>2009 |
| 20290 | MULTIWAVELENGTH<br>SMOKE DETECTOR USING<br>WHITE LIGHT LED                                            | United<br>States of<br>America  | WESTMIN | Granted   | 10/835930       | 30-<br>Apr-<br>2004 | 7233253 | 19-<br>Jun-<br>2007 |
| 20290 | MULTIWAVELENGTH<br>SMOKE DETECTOR USING<br>WHITE LIGHT LED                                            | Patent<br>Cooperation<br>Treaty | WESTMIN | Converted | PCT/US04/036220 | 29-<br>Oct-<br>2004 |         |                     |
| 20291 | FIRE ALARM WITH DISTINCT<br>ALARM RESET THRESHOLD                                                     | United<br>States of<br>America  | WESTMIN | Expired   | 60/502335       | 12-<br>Sep-<br>2003 |         |                     |
| 20291 | FIRE ALARM WITH DISTINCT<br>ALARM RESET THRESHOLD                                                     | United<br>States of<br>America  | WESTMIN | Granted   | 11/500851       | 08-<br>Aug-<br>2006 | 7532117 | 12-<br>May-<br>2009 |
| 20291 | FIRE ALARM WITH DISTINCT<br>ALARM RESET THRESHOLD                                                     | United<br>States of<br>America  | WESTMIN | Granted   | 10/705146       | 10-<br>Nov-<br>2003 | 7091855 | 15-<br>Aug-<br>2006 |
| 20292 | NATIONAL SECURITY<br>WARNING SYSTEM<br>INTEGRATED WITH<br>BUILDING FIRE ALARM<br>NOTIFICATION SYSTEMS | United<br>States of<br>America  | WESTMIN | Expired   | 60/502337       | 12-<br>Sep-<br>2003 |         |                     |
| 20292 | NATIONAL SECURITY<br>WARNING SYSTEM<br>INTEGRATED WITH<br>BUILDING FIRE ALARM<br>NOTIFICATION SYSTEMS | United<br>States of<br>America  | WESTMIN | Granted   | 10/914666       | 09-<br>Aug-<br>2004 | 7145466 | 05-<br>Dec-<br>2006 |
| 20292 | EMERGENCY WARNING<br>SYSTEM INTEGRATED WITH<br>BUILDING HAZARD ALARM<br>NOTIFICATION SYSTEM           | United<br>States of<br>America  | WESTMIN | Granted   | 11/580654       | 13-<br>Oct-<br>2006 | 7714733 | 11-<br>May-<br>2010 |

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| 20292      | NATIONAL SECURITY WARNING SYSTEM INTEGRATED WITH BUILDING FIRE ALARM NOTIFICATION SYSTEM | United States of America   | WESTMIN | Granted   | 10/720810         | 24-Nov-2003 | 7295127 | 13-Nov-2007 |
| 20295      | DIGITAL CLOCK                                                                            | France                     | WESTMIN | Expired   | PV42025           | 03-Jan-1979 | 129154  | 14-Nov-1979 |
| 20296      | TERMINAL                                                                                 | France                     | WESTMIN | Expired   | 42469             | 17-May-1979 | 130572  | 17-May-1979 |
| 20297      | MULTI-CANDELA STROBE DESIGN                                                              | United States of America   | WESTMIN | Expired   | 60/405685         | 22-Aug-2002 |         |             |
| 20297      | MULTI-CANDELA EMERGENCY STROBE LIGHT                                                     | United States of America   | WESTMIN | Granted   | 10/645396         | 21-Aug-2003 | 7006003 | 28-Feb-2006 |
| F-FD-00085 | Smoke detector with airflow barrier                                                      | Australia                  | WESTMIN | Published | 2014240325        | 07-Oct-2014 |         |             |
| F-FD-00085 | Smoke detector with airflow barrier                                                      | Germany                    | WESTMIN | Published | 14187813.2        | 06-Oct-2014 |         |             |
| F-FD-00085 | Smoke detector with airflow barrier                                                      | European Patent Convention | WESTMIN | Published | 14187813.2        | 06-Oct-2014 |         |             |
| F-FD-00085 | Smoke detector with airflow barrier                                                      | France                     | WESTMIN | Published | 14187813.2        | 06-Oct-2014 |         |             |
| F-FD-00085 | SMOKE DETECTOR WITH AIRFLOW BARRIER                                                      | United States of America   | WESTMIN | Granted   | 14/047938         | 07-Oct-2013 | 9058731 | 16-Jun-2015 |
| F-FD-00085 | Smoke Detector with Airflow Barrier                                                      | United States of America   | WESTMIN | Granted   | 14/721713         | 26-May-2015 | 9483924 | 01-Nov-2016 |
| F-FD-00087 | SYSTEM AND METHOD FOR TESTING BATTERY BACKUP CAPACITIES IN ALARM SYSTEMS                 | United States of America   | WESTMIN | Granted   | 14/173485         | 05-Feb-2014 | 9361785 | 07-Jun-2016 |
| F-FD-00089 | Testing System and Method for Fire Alarm System                                          | European Patent Convention | WESTMIN | Published | 15701255.0        | 12-Jan-2015 |         |             |
| F-FD-00089 | Testing System and Method for Fire Alarm System                                          | United States of America   | WESTMIN | Granted   | 14/157847         | 17-Jan-2014 | 9552720 | 24-Jan-2017 |
| F-FD-00089 | Testing System and Method for Fire Alarm System                                          | United States of America   | WESTMIN | Granted   | 15/378363         | 14-Dec-2016 | 9990841 | 05-Jun-2018 |
| F-FD-00089 |                                                                                          | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/IB2015/050229 | 12-Jan-2015 |         |             |

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| F-FD-00090 | Device and apparatus for self-testing smoke detector baffle system | Australia                  | WESTMIN | Published | 2015249510        | 16-Apr-2015 |         |             |
| F-FD-00090 | Device adn Apparatus for self-testing smoke detector baffle system | European Patent Convention | WESTMIN | Published | 15718104.1        | 16-Apr-2015 |         |             |
| F-FD-00090 | DEVICE AND APPARATUS FOR SELF-TESTING SMOKE DETECTOR BAFFLE SYSTEM | United States of America   | WESTMIN | Granted   | 14/257515         | 21-Apr-2014 | 9679468 | 13-Jun-2017 |
| F-FD-00090 | DEVICE AND APPARATUS FOR SELF-TESTING SMOKE DETECTOR BAFFLE SYSTEM | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/IB2015/052788 | 16-Apr-2015 |         |             |
| F-FD-00091 | Self-testing Smoke Detector with Integrated Smoke Source           | Australia                  | WESTMIN | Published | 2015249511        | 16-Apr-2015 |         |             |
| F-FD-00091 | Self-Testing Smoke Detector with Integrated Smoke Source           | European Patent Convention | WESTMIN | Published | 15718105.8        | 16-Apr-2015 |         |             |
| F-FD-00091 | SELF-TESTING SMOKE DETECTOR WITH INTEGRATED SMOKE SOURCE           | United States of America   | WESTMIN | Granted   | 14/259176         | 23-Apr-2014 | 9659485 | 23-May-2017 |
| F-FD-00091 |                                                                    | Patent Cooperation Treaty  | WESTMIN | Published | PCT/US2015/052791 | 16-Apr-2015 |         |             |
| F-FD-00092 | Method and apparatus for testing fire alarm initiating devices     | Australia                  | WESTMIN | Published | 2015221823        | 24-Feb-2015 |         |             |
| F-FD-00092 | Method and Apparatus for Testing Fire Alarm Initiating Devices     | European Patent Convention | WESTMIN | Published | 15707428.7        | 24-Feb-2015 |         |             |
| F-FD-00092 | METHOD AND APPARATUS FOR TESTING FIRE INITIATING APPLIANCES        | United States of America   | WESTMIN | Expired   | 61/946674         | 28-Feb-2014 |         |             |
| F-FD-00092 | Method and apparatus for testing fire alarm initiating devices     | United States of America   | WESTMIN | Granted   | 14/455024         | 08-Aug-2014 | 9767679 | 19-Sep-2017 |
| F-FD-00092 | Method and apparatus for testing fire alarm initiating devices     | Patent Cooperation Treaty  | WESTMIN | Published | PCT/IB2015/051377 | 24-Feb-2015 |         |             |

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| F-FD-00095 | BACK BOX WITH MOUNTING POSTS PROTECTING FROM RECESSED PORTIONS IN SIDEWALLS | United States of America   | WESTMIN | Granted   | 14/319839         | 30-Jun-2014 | 9673596        | 06-Jun-2017 |
| F-FD-00096 |                                                                             | United Arab Emirates       | WESTMIN | Pending   | D243/15           | 18-Apr-2015 |                |             |
| F-FD-00096 | NOTIFICATION APPLIANCE                                                      | Australia                  | WESTMIN | Granted   | 201511843         | 07-Apr-2015 | AU 361708      | 07-May-2015 |
| F-FD-00096 | STROBE NOTIFICATION APPLIANCE                                               | Australia                  | WESTMIN | Published | 2015298173        | 24-Jul-2015 |                |             |
| F-FD-00096 |                                                                             | European Community         | WESTMIN | Granted   | 002680074-0001    | 13-Apr-2015 | 002680074-0001 | 13-Apr-2015 |
| F-FD-00096 | STROBE NOTIFICATION APPLIANCE                                               | European Patent Convention | WESTMIN | Published | 15750185.9        | 24-Jul-2015 |                |             |
| F-FD-00096 | NOTIFICATION APPLIANCE                                                      | New Zealand                | WESTMIN | Granted   | 420140            | 10-Apr-2015 | 420140         | 20-Apr-2016 |
| F-FD-00096 |                                                                             | Saudi Arabia               | WESTMIN | Granted   | 415360324         | 13-Apr-2015 | 4397           | 08-Jul-2016 |
| F-FD-00096 | LED STROBE NOTIFICATION APPLIANCE                                           | United States of America   | WESTMIN | Expired   | 62/031030         | 30-Jul-2014 |                |             |
| F-FD-00096 | OPTIC FOR A STROBE NOTIFICATION APPLIANCE                                   | United States of America   | WESTMIN | Granted   | 14/514071         | 14-Oct-2014 | 10002509       | 19-Jun-2018 |
| F-FD-00096 | NOTIFICATION APPLIANCE                                                      | United States of America   | WESTMIN | Granted   | 14/514097         | 14-Oct-2014 | 9875630        | 23-Jan-2018 |
| F-FD-00096 | STROBE NOTIFICATION APPLIANCE                                               | United States of America   | WESTMIN | Granted   | 14/514083         | 14-Oct-2014 | 9959725        | 01-May-2018 |
| F-FD-00096 | ADAPTER BRACKET FOR NOTIFICATION APPLIANCE                                  | United States of America   | WESTMIN | Published | 14/514120         | 14-Oct-2014 |                |             |
| F-FD-00096 | NOTIFICATION APPLIANCE                                                      | United States of America   | WESTMIN | Granted   | 14/514113         | 14-Oct-2014 | 9704364        | 11-Jul-2017 |
| F-FD-00096 | NOTIFICATION APPLIANCE                                                      | United States of America   | WESTMIN | Granted   | 29/512235         | 17-Dec-2014 | D769757        | 25-Oct-2016 |
| F-FD-00096 | STROBE NOTIFICATION APPLIANCE                                               | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US2015/042018 | 24-Jul-2015 |                |             |
| F-FD-00125 | Emergency System Textual Notification Device with Alert Mechanism           | United States of America   | WESTMIN | Granted   | 14/670921         | 27-Mar-2015 | 9672704        | 06-Jun-2017 |
| F-FD-00126 | SYSTEM AND METHOD FOR SMOKE DETECTOR PERFORMANCE ANALYSIS                   | United States of America   | WESTMIN | Published | 14/814805         | 31-Jul-2015 |                |             |

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| F-FD-00130 |                                                                             | United States of America   | WESTMIN | Expired   | 62/116004         | 13-Feb-2015 |         |             |
| F-FD-00130 | Fire Sensor Having a Sensor Guard for Heat and Smoke Detection Applications | United States of America   | WESTMIN | Granted   | 14/728373         | 02-Jun-2015 | 9830794 | 28-Nov-2017 |
| F-FD-00130 |                                                                             | Patent Cooperation Treaty  | WESTMIN | Published | PCT/IB2016/050026 | 04-Jan-2016 |         |             |
| F-FD-00131 | Modular wireless Mass Evacuation Notification System                        | European Patent Convention | WESTMIN | Published | 15184521          | 09-Sep-2015 |         |             |
| F-FD-00131 |                                                                             | United States of America   | WESTMIN | Expired   | 62/060845         | 07-Oct-2014 |         |             |
| F-FD-00131 | Modular Wireless Mass Evacuation Notification System                        | United States of America   | WESTMIN | Granted   | 14/846368         | 04-Sep-2015 | 9728074 | 08-Aug-2017 |
| F-FD-00131 | Modular Wireless Mass Evacuation Notification System                        | United States of America   | WESTMIN | Published | 15/637666         | 29-Jun-2017 |         |             |
| F-FD-00131 | MODULAR WIRELESS MASS EVACUATION NOTIFICATION SYSTEM                        | United States of America   | WESTMIN | Published | 15/637671         | 29-Jun-2017 |         |             |
| F-FD-00132 | Master Slave Wireless Fire alarm and Mass Notification System               | European Patent Convention | WESTMIN | Published | 15184523.7        | 09-Sep-2015 |         |             |
| F-FD-00132 |                                                                             | United States of America   | WESTMIN | Expired   | 62/047982         | 09-Sep-2014 |         |             |
| F-FD-00132 | MASTER SLAVE WIRELESS FIRE ALARM AND MASS NOTIFICATION SYSTEM               | United States of America   | WESTMIN | Granted   | 14/846377         | 04-Sep-2015 | 9875644 | 23-Jan-2018 |
| F-FD-00132 | Master Slave Wireless Fire Alarm and Mass Notification System               | United States of America   | WESTMIN | Published | 15/845035         | 18-Dec-2017 |         |             |
| F-FD-00133 | TSW Advanced Network Diagnostics                                            | United States of America   | WESTMIN | Expired   | 62/132854         | 13-Mar-2015 |         |             |
| F-FD-00134 | System and method for providing supplemental power to units                 | Australia                  | WESTMIN | Published | 2016213785        | 11-Aug-2016 |         |             |
| F-FD-00134 |                                                                             | European Patent Convention | WESTMIN | Published | 16183884.2        | 11-Aug-2016 |         |             |



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| F-FD-00134 | System and Method for Providing Power to Notification Appliances                       | United States of America   | WESTMIN | Expired   | 62/235419         | 30-Sep-2015 |          |             |
| F-FD-00134 | System and Method for Charging Supplemental Power Units for alarm notification devices | United States of America   | WESTMIN | Granted   | 15/095614         | 11-Apr-2016 | 10008105 | 26-Jun-2018 |
| F-FD-00134 |                                                                                        | United States of America   | WESTMIN | Pending   | 15/990125         | 25-May-2018 |          |             |
| F-FD-00135 | Contextual Fire Detection and Alarm Verification Method and System                     | European Patent Convention | WESTMIN | Published | 16183712.5        | 11-Aug-2016 |          |             |
| F-FD-00135 | Contextual Fire Detection and Alarm Verification Method and System                     | United States of America   | WESTMIN | Granted   | 14/860286         | 21-Sep-2015 | 9824574  | 21-Nov-2017 |
| F-FD-00135 | Contextual Fire Detection and alarm Verification method and system                     | United States of America   | WESTMIN | Published | 15/805223         | 07-Nov-2017 |          |             |
| F-FD-00137 | Fire/Security Service System with Augmented Reality                                    | United States of America   | WESTMIN | Published | 14/863674         | 24-Sep-2015 |          |             |
| F-FD-00139 |                                                                                        | European Community         | WESTMIN | Pending   | 002938480         | 08-Jan-2016 |          |             |
| F-FD-00141 | Door Lock Extender and Method of Use                                                   | United States of America   | WESTMIN | Published | 14/943751         | 17-Nov-2015 |          |             |
| F-FD-00142 | A Fire Detection System                                                                | United Kingdom             | WESTMIN | Abandoned | 1602396.2         | 10-Feb-2016 |          |             |
| F-FD-00142 |                                                                                        | Patent Cooperation Treaty  | WESTMIN | Published | PCT/EP2017/052638 | 07-Feb-2017 |          |             |
| F-FD-00143 | Interface Actuator Device and Method of Use                                            | United States of America   | WESTMIN | Published | 14/988949         | 06-Jan-2016 |          |             |
| F-FD-00144 | Addressing Method for Slave Units in Fire Detection System                             | United States of America   | WESTMIN | Published | 15/095697         | 11-Apr-2016 |          |             |
| F-FD-00144 | Addressing Method for Slave Units in Fire Detection System                             | Patent Cooperation Treaty  | WESTMIN | Published | PCT/IB2017/052098 | 11-Apr-2017 |          |             |

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| F-FD-00145 | Fire Detection System with Automatic Firmware Updating                | United States of America  | WESTMIN | Published | 15/095680         | 11-Apr-2016 |         |             |
| F-FD-00145 | Fire Detection System with Automatic Firmware Updating                | Patent Cooperation Treaty | WESTMIN | Published | PCT/IB2017/052095 | 11-Apr-2017 |         |             |
| F-FD-00146 | Fire Detection System with Distributed File System                    | United States of America  | WESTMIN | Published | 15/095691         | 11-Apr-2016 |         |             |
| F-FD-00146 | Fire Detection System with Distributed File System                    | Patent Cooperation Treaty | WESTMIN | Published | PCT/IB2017/052096 | 11-Apr-2017 |         |             |
| F-FD-00147 | System and Method for Providing Temporary Power to Intermittent Units | United States of America  | WESTMIN | Granted   | 15/152099         | 11-May-2016 | 9881490 | 30-Jan-2018 |
| F-FD-00147 | System and Method for Providing Temporary Power to Intermittent Units | United States of America  | WESTMIN | Published | 15/864202         | 08-Jan-2018 |         |             |
| F-FD-00147 | System and Method for Providing Temporary Power to Intermittent Units | Patent Cooperation Treaty | WESTMIN | Published | PCT/IB2017/052215 | 18-Apr-2017 |         |             |
| F-FD-00148 | Method and System for Liquid Cleaning of Smoke Sensor Heads           | United States of America  | WESTMIN | Published | 15/088610         | 01-Apr-2016 |         |             |
| F-FD-00149 | Fire Detection System with Self-Testing Fire Sensors                  | United States of America  | WESTMIN | Granted   | 15/088618         | 01-Apr-2016 | 9959748 | 01-May-2018 |
| F-FD-00150 | Mesh Network Testing System and Method for Fire Alarm System          | United States of America  | WESTMIN | Published | 15/088533         | 01-Apr-2016 |         |             |
| F-FD-00151 | Energy Harvesting from Fire Panel                                     | Patent Cooperation Treaty | WESTMIN | Published | PCT/US16/37494    | 15-Jun-2016 |         |             |
| F-FD-00153 | Method and System for Monitoring Fire Alarm Systems                   | United States of America  | WESTMIN | Granted   | 15/342427         | 03-Nov-2016 | 9978256 | 22-May-2018 |
| F-FD-00153 | Method and system for monitoring fire alarm systems                   | United States of America  | WESTMIN | Pending   | 15/957543         | 19-Apr-2018 |         |             |

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| F-FD-00153 | Method and System for Monitoring Fire Alarm Systems                             | Patent Cooperation Treaty  | WESTMIN | Published | PCT/IB2017/056828 | 02-Nov-2017 |  |  |
| F-FD-00161 | Location-Aware Provisioning System for Fire Alarm System and Method Therefor    | Patent Cooperation Treaty  | WESTMIN | Pending   | PCT/IB2017/050249 | 17-Jan-2017 |  |  |
| F-FD-00162 | Mobile App User Interface                                                       | United States of America   | WESTMIN | Expired   | 62/359428         | 07-Jul-2016 |  |  |
| F-FD-00162 | Building Asset Management System                                                | United States of America   | WESTMIN | Published | 15/446256         | 01-Mar-2017 |  |  |
| F-FD-00162 | BIOREACTOR USING ACOUSTIC STANDING WAVES                                        | United States of America   | WESTMIN | Published | 15/446289         | 01-Mar-2017 |  |  |
| F-FD-00162 | Fire Alarm Inspection Application and User Interface                            | United States of America   | WESTMIN | Published | 15/600509         | 19-May-2017 |  |  |
| F-FD-00163 | System and Method for Testing Emergency Address Systems Using Voice Recognition | United States of America   | WESTMIN | Pending   | 15/619780         | 12-Jun-2017 |  |  |
| F-FD-00167 | : SYNCHRONIZATION OF NOTIFICATION PATTERNS IN ALERTING SYSTEMS                  | United States of America   | WESTMIN | Published | 15/345555         | 08-Nov-2016 |  |  |
| F-FD-00167 | : SYNCHRONIZATION OF NOTIFICATION PATTERNS IN ALERTING SYSTEMS                  | Patent Cooperation Treaty  | WESTMIN | Published | PCT/US2016/60883  | 08-Nov-2016 |  |  |
| F-FD-00173 |                                                                                 | United States of America   | WESTMIN | Unfiled   |                   |             |  |  |
| F-FD-00174 | Software Defined Battery Charger System and Method                              | United States of America   | WESTMIN | Pending   | 15/696641         | 06-Sep-2017 |  |  |
| F-FD-00175 | Security Panel Gateway System and Method                                        | European Patent Convention | WESTMIN | Pending   | 18176494.5        | 07-Jun-2018 |  |  |
| F-FD-00175 | Security Panel Gateway System and Method                                        | United States of America   | WESTMIN | Pending   | 15/617678         | 08-Jun-2017 |  |  |
| F-FD-00177 | Power Supply Ripple Detector                                                    | United States of America   | WESTMIN | Pending   | 15/838898         | 12-Dec-2017 |  |  |
| F-FD-00183 | Fire Alarm Building Management Integration                                      | United States of America   | WESTMIN | Expired   | 62/492418         | 01-May-2017 |  |  |

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| F-FD-00183 | Fire alarm Building Management Integration                            | Patent Cooperation Treaty | WESTMIN | Pending   | IB2018/053001     | 01-May-2018 |  |  |
| F-FD-00188 | Method for Acoustically counting Gunshots Fired Indoors               | United States of America  | WESTMIN | Expired   | 62/380707         | 29-Aug-2016 |  |  |
| F-FD-00188 | Method for Acoustically Counting Gunshots Fired Indoors               | Patent Cooperation Treaty | WESTMIN | Published | PCT/US2017/046952 | 15-Aug-2017 |  |  |
| F-FD-00189 |                                                                       | United States of America  | WESTMIN | Expired   | 62/380701         | 29-Aug-2016 |  |  |
| F-FD-00189 | System and Method for Acoustically Identifying Gunshots Fired Indoors | Patent Cooperation Treaty | WESTMIN | Published | PCT/US2017/046940 | 15-Aug-2017 |  |  |
| F-FD-00190 | System and Method for Identifying and Locating Sensed Events          | United States of America  | WESTMIN | Expired   | 62/483039         | 07-Apr-2017 |  |  |
| F-FD-00190 | System and Method for Identifying and Locating Sensed Events          | Patent Cooperation Treaty | WESTMIN | Pending   | PCT/IB2018/052404 | 06-Apr-2018 |  |  |
| F-FD-00191 | Method and Apparatus for Shot Detection Systems                       | United States of America  | WESTMIN | Pending   | 62/631296         | 15-Feb-2018 |  |  |
| F-FD-00194 | Method and apparatus distributed shot detection systems               | United States of America  | WESTMIN | Pending   | 62/637161         | 01-Mar-2018 |  |  |
| F-TP-00036 | WIRELESS FIREFIGHTER INTERFACE                                        | United States of America  | WESTMIN | Expired   | 60/660103         | 08-Mar-2005 |  |  |
| F-TP-00037 | STRUCTURE ALERT                                                       | United States of America  | WESTMIN | Expired   | 60/660104         | 08-Mar-2005 |  |  |
| F-TP-00037 | STRUCTURE FAILURE ALERT SYSTEM                                        | United States of America  | WESTMIN | Abandoned | 11/340047         | 26-Jan-2006 |  |  |
| F-TP-00051 | FIRE ALARM DISPATCHED DETECTION & EXTINGUISHING ROBOT                 | United States of America  | WESTMIN | Expired   | 60/665450         | 25-Mar-2005 |  |  |
| F-TP-00051 | Fire Alarm Dispatched Detection & Extinguishing Robot                 | United States of America  | WESTMIN | Expired   | 60/816287         | 23-Jun-2006 |  |  |

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| F-TP-00051 | METHOD AND APPARATUS FOR DETECTION OF HAZARDOUS OR POTENTIALLY HAZARDOUS CONDITIONS                           | United States of America | WESTMIN | Abandoned | 11/522671 | 18-Sep-2006 | 7619534 | 17-Nov-2009 |
| F-TP-00053 | METHOD AND APPARATUS FOR VERIFYING INSTALLATION OF NOTIFICATION APPLIANCES                                    | United States of America | WESTMIN | Expired   | 60/665449 | 25-Mar-2005 |         |             |
| F-TP-00053 | METHOD AND APPARATUS FOR VERIFYING INSTALLATION OF NOTIFICATION APPLIANCES DURING LOW INPUT VOLTAGE CONDITION | United States of America | WESTMIN | Granted   | 11/282358 | 18-Nov-2005 | 7333010 | 19-Feb-2008 |
| F-TP-00059 | MUSTER STATION                                                                                                | United States of America | WESTMIN | Expired   | 60/673604 | 21-Apr-2005 |         |             |
| F-TP-00059 | MUSTER STATION AND SYSTEM FOR EMERGENCY COMMUNICATION                                                         | United States of America | WESTMIN | Abandoned | 11/391525 | 28-Mar-2006 |         |             |
| F-TP-00065 | TROUBLE INDICATION FOR LOW OR HIGH VOLTAGE CONDITION                                                          | United States of America | WESTMIN | Abandoned | 11/282356 | 18-Nov-2005 | 7382245 | 03-Jun-2008 |
| F-TP-00073 | FIRE ALARM TEXTUAL NOTIFICATION DEVICES                                                                       | United States of America | WESTMIN | Expired   | 60/713569 | 01-Sep-2005 |         |             |
| F-TP-00073 | FIRE ALARM TEXTUAL NOTIFICATION RELATED APPLICATION                                                           | United States of America | WESTMIN | Granted   | 11/514612 | 01-Sep-2006 | 8319625 | 27-Nov-2012 |
| F-TP-00085 | METHOD AND APPARATUS FOR CALCULATING VOLTAGE DROP                                                             | United States of America | WESTMIN | Granted   | 11/340979 | 27-Jan-2006 | 7469204 | 23-Dec-2008 |
| F-TP-00122 | OPTICAL ELEMENT DRIVING CIRCUIT                                                                               | United States of America | WESTMIN | Granted   | 11/479641 | 30-Jun-2006 | 7471049 | 30-Dec-2008 |
| F-TP-00122 | OPTICAL ELEMENT DRIVING CIRCUIT                                                                               | United States of America | WESTMIN | Granted   | 11/432120 | 11-May-2006 | 7456585 | 25-Nov-2008 |
| F-TP-00130 | SELF-ADJUSTING AND SELF-MODIFYING ADDRESSABLE SPEAKER                                                         | United States of America | WESTMIN | Expired   | 60/904970 | 05-Mar-2007 |         |             |

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| F-TP-00130 | SELF-ADJUSTING AND SELF-MODIFYING ADDRESSABLE SPEAKER                           | United States of America  | WESTMIN | Granted   | 12/040300       | 29-Feb-2008 | 8023661 | 20-Sep-2011 |
| F-TP-00144 | ALARM SYSTEM POWER                                                              | United States of America  | WESTMIN | Granted   | 11/521877       | 15-Sep-2006 | 7459881 | 02-Dec-2008 |
| F-TP-00145 | BUILDING PLENUM                                                                 | United States of America  | WESTMIN | Abandoned | 11/839331       | 15-Aug-2007 |         |             |
| F-TP-00188 | SYSTEM FOR TESTING NAC OPERABILITY USING BACKUP POWER                           | United States of America  | WESTMIN | Granted   | 11/825213       | 05-Jul-2007 | 8558711 | 15-Oct-2013 |
| F-TP-00190 | METHOD AND APPARATUS FOR PROVIDING OCCUPANCY INFORMATION IN A FIRE ALARM SYSTEM | United States of America  | WESTMIN | Granted   | 11/881312       | 26-Jul-2007 | 7688212 | 30-Mar-2010 |
| F-TP-00197 | GUNSHOT ALERTING SYSTEM                                                         | United States of America  | WESTMIN | Expired   | 60/927215       | 01-May-2007 |         |             |
| F-TP-00229 | NON-ADDRESSABLE DUAL NOTIFICATION APPLIANCE                                     | United States of America  | WESTMIN | Granted   | 11/906827       | 04-Oct-2007 | 7999692 | 16-Aug-2011 |
| F-TP-00240 | MULTIPLE EVENT NOTIFICATION APPLIANCE                                           | United States of America  | WESTMIN | Granted   | 12/360461       | 27-Jan-2009 | 8138928 | 20-Mar-2012 |
| F-TP-00241 | VOX CIRCUIT WITH 2-WIRE INTERFACES                                              | Patent Cooperation Treaty | WESTMIN | Converted | PCT/US08/078387 | 01-Oct-2008 |         |             |
| F-TP-00263 | SYSTEM FOR TESTING NAC OPERABILITY USING REDUCED OPERATING VOLTAGE              | United States of America  | WESTMIN | Granted   | 13/275946       | 18-Oct-2011 | 8289146 | 16-Oct-2012 |
| F-TP-00263 | SYSTEM FOR TESTING NAC OPERABILITY USING REDUCED OPERATING VOLTAGE              | United States of America  | WESTMIN | Granted   | 12/277790       | 25-Nov-2008 | 8063763 | 22-Nov-2011 |
| F-TP-00306 | SWITCHABLE STROBE LENS                                                          | United States of America  | WESTMIN | Expired   | 61/060551       | 11-Jun-2008 |         |             |
| F-TP-00306 | SWITCHABLE STROBE LENS                                                          | United States of America  | WESTMIN | Granted   | 12/260728       | 29-Oct-2008 | 8049632 | 01-Nov-2011 |
| F-TP-00306 | SWITCHABLE STROBE LENS                                                          | United States of America  | WESTMIN | Granted   | 13/195497       | 01-Aug-2011 | 8269637 | 18-Sep-2012 |
| R-FD-00003 | EMERGENCY NOTIFICATION APPLIANCE MOUNTING BRACKET                               | United States of America  | WESTMIN | Granted   | 12/249580       | 10-Oct-2008 | 8511630 | 20-Aug-2013 |

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| R-FD-00005 | COMBINATION FIRE ALARM NOTIFICATION/EMERGENCY LIGHTING APPLIANCE         | United States of America | WESTMIN | Expired   | 61/153801 | 19-Feb-2009 |         |             |
| R-FD-00005 | COMBINATION FIRE ALARM NOTIFICATION/EMERGENCY LIGHTING APPLIANCE         | United States of America | WESTMIN | Abandoned | 12/706788 | 17-Feb-2010 |         |             |
| R-FD-00007 | MAGNETIC RELEASING AND SECURITY DEVICE                                   | United States of America | WESTMIN | Abandoned | 12/437428 | 07-May-2009 | 8231151 | 31-Jul-2012 |
| R-FD-00008 | GROUND FAULT DETECTION                                                   | United States of America | WESTMIN | Granted   | 12/533828 | 31-Jul-2009 | 8373420 | 12-Feb-2013 |
| R-FD-00009 | SELF-TESTING NOTIFICATION APPLIANCE                                      | United States of America | WESTMIN | Granted   | 12/483039 | 11-Jun-2009 | 8228182 | 24-Jul-2012 |
| R-FD-00012 | CONFIGURABLE NOTIFICATION DEVICE                                         | United States of America | WESTMIN | Granted   | 12/572014 | 01-Oct-2009 | 8368528 | 05-Feb-2013 |
| R-FD-00013 |                                                                          | United States of America | WESTMIN | Expired   | 61/231090 | 04-Aug-2009 |         |             |
| R-FD-00013 | METHOD AND APPARATUS FOR INDICIA SELECTION                               | United States of America | WESTMIN | Granted   | 12/819936 | 21-Jun-2010 | 8383967 | 26-Feb-2013 |
| R-FD-00016 | PSEURO NON-ADDRESSABLE ALARM SYSTEM                                      | United States of America | WESTMIN | Granted   | 12/884818 | 17-Sep-2010 | 8378806 | 19-Feb-2013 |
| R-FD-00017 | ADJUSTABLE STROBE REFLECTOR ASSEMBLY                                     | United States of America | WESTMIN | Granted   | 12/749928 | 30-Mar-2010 | 8845136 | 30-Sep-2014 |
| R-FD-00021 | SYSTEM AND METHOD FOR DETECTING A PROPERTY OF A STROBE COVER             | United States of America | WESTMIN | Granted   | 14/098007 | 05-Dec-2013 | 9185774 | 10-Nov-2015 |
| R-FD-00021 | SYSTEM AND METHOD FOR DETECTING A PROPERTY OF A STROBE COVER             | United States of America | WESTMIN | Granted   | 12/851958 | 06-Aug-2010 | 8624754 | 07-Jan-2014 |
| R-FD-00022 | INTEGRATED TEST-MODE FOR MONITORING OF FIRE AND SECURITY SYSTEM NETWORKS | United States of America | WESTMIN | Granted   | 13/042191 | 07-Mar-2011 | 8698613 | 15-Apr-2014 |
| R-FD-00023 | DUCT DETECTOR                                                            | United States of America | WESTMIN | Granted   | 12/946708 | 15-Nov-2010 | 8705038 | 22-Apr-2014 |

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| R-FD-00024 | METHOD AND SYSTEM FOR WIRELESS CONFIGURATION, CONTROL, AND STATUS REPORTING OF DEVICES IN A FIRE ALARM SYSTEM | United States of America   | WESTMIN | Granted   | 12/972151       | 17-Dec-2010 | 8508359    | 13-Aug-2013 |
| R-FD-00024 | METHOD AND SYSTEM FOR WIRELESS CONFIGURATION, CONTROL, AND STATUS REPORTING OF DEVICES IN A FIRE ALARM SYSTEM | United States of America   | WESTMIN | Granted   | 13/929335       | 27-Jun-2013 | 8988217    | 24-Mar-2015 |
| R-FD-00026 | APPARATUS AND METHODS FOR PROVIDING EMERGENCY OVERRIDE OF INFORMATIONAL DISPLAYS                              | United States of America   | WESTMIN | Granted   | 12/944801       | 12-Nov-2010 | 8723681    | 13-May-2014 |
| R-FD-00028 | SUPERVISION FOR A LIGHT DISPLAY DEVICE                                                                        | European Patent Convention | WESTMIN | Published | 11749587.9      | 05-Jul-2011 |            |             |
| R-FD-00028 | SUPERVISION FOR A LIGHT DISPLAY DEVICE                                                                        | United States of America   | WESTMIN | Granted   | 12/885047       | 17-Sep-2010 | 8614550    | 24-Dec-2013 |
| R-FD-00028 | SUPERVISION FOR A LIGHT DISPLAY DEVICE                                                                        | United States of America   | WESTMIN | Granted   | 14/075157       | 08-Nov-2013 | 9642210    | 02-May-2017 |
| R-FD-00028 | SUPERVISION FOR A LIGHT DISPLAY DEVICE                                                                        | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US11/042936 | 05-Jul-2011 |            |             |
| R-FD-00030 | AUTOMATIC CONFIGURATION OF INITIATING DEVICES                                                                 | Australia                  | WESTMIN | Granted   | 2012287436      | 15-Jun-2012 | 2012287436 | 20-Aug-2015 |
| R-FD-00030 | AUTOMATIC CONFIGURATION OF INITIATING DEVICES                                                                 | European Patent Convention | WESTMIN | Published | 12731816.0      | 15-Jun-2012 |            |             |
| R-FD-00030 | Automatic configuration of initiating devices                                                                 | United States of America   | WESTMIN | Granted   | 13/193322       | 28-Jul-2011 | 8773254    | 08-Jul-2014 |
| R-FD-00030 | METHOD AND SYSTEM FOR CONFIGURING FIRE ALARM DEVICE GROUPINGS AT THE FIRE ALARM DEVICE                        | United States of America   | WESTMIN | Abandoned | 12/970035       | 16-Dec-2010 |            |             |
| R-FD-00030 | AUTOMATIC CONFIGURATION OF INITIATING DEVICES                                                                 | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US12/042576 | 15-Jun-2012 |            |             |



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| R-FD-00031 | METHOD AND APPARATUS FOR COMMUNICATING WITH NON-ADDRESSABLE NOTIFICATION APPLIANCES | United States of America   | WESTMIN | Granted   | 13/193304       | 28-Jul-2011 | 8760280 | 24-Jun-2014 |
| R-FD-00032 | SYSTEM AND METHOD FOR EMERGENCY MESSAGE PREVIEW AND TRANSMISSION                    | United States of America   | WESTMIN | Published | 13/207140       | 10-Aug-2011 |         |             |
| R-FD-00037 | IMPROVED PULL STATION                                                               | United States of America   | WESTMIN | Granted   | 13/074994       | 29-Mar-2011 | 8432266 | 30-Apr-2013 |
| R-FD-00037 | PULL STATION                                                                        | United States of America   | WESTMIN | Granted   | 29/394547       | 17-Jun-2011 | D664054 | 24-Jul-2012 |
| R-FD-00037 | PULL STATION ACTUATOR                                                               | United States of America   | WESTMIN | Granted   | 29/394549       | 17-Jun-2011 | D664462 | 31-Jul-2012 |
| R-FD-00037 | PULL STATION                                                                        | United States of America   | WESTMIN | Granted   | 13/767490       | 14-Feb-2013 | 8730019 | 20-May-2014 |
| R-FD-00039 | MIXED ELEMENT STROBE                                                                | United States of America   | WESTMIN | Granted   | 13/160199       | 14-Jun-2011 | 8723682 | 13-May-2014 |
| R-FD-00039 | MIXED ELEMENT STROBE                                                                | United States of America   | WESTMIN | Granted   | 14/251322       | 11-Apr-2014 | 8890708 | 18-Nov-2014 |
| R-FD-00039 | MIXED ELEMENT STROBE                                                                | United States of America   | WESTMIN | Granted   | 14/251309       | 11-Apr-2014 | 8890707 | 18-Nov-2014 |
| R-FD-00040 | DUAL MODE LED STROBE                                                                | European Patent Convention | WESTMIN | Published | 12730075.4      | 29-May-2012 |         |             |
| R-FD-00040 | DUAL MODE LED STROBE                                                                | United States of America   | WESTMIN | Granted   | 13/160185       | 14-Jun-2011 | 8773276 | 08-Jul-2014 |
| R-FD-00040 | DUAL MODE LED STROBE                                                                | United States of America   | WESTMIN | Granted   | 14/324816       | 07-Jul-2014 | 9355535 | 31-May-2016 |
| R-FD-00040 | Conditionally Variable Strobe Notification Appliance                                | United States of America   | WESTMIN | Granted   | 14/341549       | 25-Jul-2014 | 9466186 | 11-Oct-2016 |
| R-FD-00040 | DUAL MODE LED STROBE                                                                | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US12/039827 | 29-May-2012 |         |             |
| R-FD-00041 | SYSTEM AND METHOD FOR WIRELESS HEAT DETECTION                                       | United States of America   | WESTMIN | Granted   | 13/249466       | 30-Sep-2011 | 8736444 | 27-May-2014 |
| R-FD-00044 | SYSTEM AND METHOD FOR SYNCHRONIZATION OF NETWORKED FIRE ALARM PANELS                | United Arab Emirates       | WESTMIN | Pending   | P344/14         | 05-Oct-2012 |         |             |

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| R-FD-00044 | SYSTEM AND METHOD FOR SYNCHRONIZATION OF NETWORKED FIRE ALARM PANELS                      | United States of America   | WESTMIN | Granted   | 13/271976       | 12-Oct-2011 | 9245427          | 26-Jan-2016 |
| R-FD-00044 | SYSTEM AND METHOD FOR SYNCHRONIZATION OF NETWORKED FIRE ALARM PANELS                      | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US12/059037 | 05-Oct-2012 |                  |             |
| R-FD-00045 | SYSTEM AND METHOD FOR BACKUP COMMUNICATION OVER ETHERNET                                  | European Patent Convention | WESTMIN | Published | 12820989.7      | 21-Nov-2012 |                  |             |
| R-FD-00045 | SYSTEM AND METHOD FOR BACKUP COMMUNICATION OVER ETHERNET                                  | United States of America   | WESTMIN | Granted   | 13/302961       | 22-Nov-2011 | 8711687          | 29-Apr-2014 |
| R-FD-00045 | SYSTEM AND METHOD FOR BACKUP COMMUNICATION OVER ETHERNET                                  | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US12/066208 | 21-Nov-2012 |                  |             |
| R-FD-00046 | SYSTEM AND METHOD FOR BACKUP COMMUNICATION USING POWER OVER ETHERNET                      | European Patent Convention | WESTMIN | Published | 12813151.3      | 21-Nov-2012 |                  |             |
| R-FD-00046 | SYSTEM AND METHOD FOR BACKUP COMMUNICATION USING POWER OVER ETHERNET                      | United States of America   | WESTMIN | Granted   | 13/301934       | 22-Nov-2011 | 8693317          | 08-Apr-2014 |
| R-FD-00046 | SYSTEM AND METHOD FOR BACKUP COMMUNICATION USING POWER OVER ETHERNET                      | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US12/066243 | 21-Nov-2012 |                  |             |
| R-FD-00047 | Method and apparatus for using rendezvous server to make connections to fire alarm panels | Australia                  | WESTMIN | Granted   | 2013300091      | 27-Jun-2013 | AU 2013300091 B2 |             |

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| R-FD-00047 | METHOD AND APPARATUS FOR USING RENDEZVOUS SERVER TO MAKE CONNECTIONS TO FIRE ALARM PANELS | Canada                     | WESTMIN | Pending   | 2880971           | 27-Jun-2013 |            |             |
| R-FD-00047 | Method and Apparatus for Using Rendezvous Server to Make Connections to fire Alarm Panels | European Patent Convention | WESTMIN | Published | 13742068.3        | 27-Jun-2013 |            |             |
| R-FD-00047 | METHOD AND APPARATUS FOR USING RENDEZVOUS SERVER TO MAKE CONNECTIONS TO FIRE ALARM PANELS | United States of America   | WESTMIN | Granted   | 13/568918         | 07-Aug-2012 | 9531560    | 27-Dec-2016 |
| R-FD-00047 | METHOD AND APPARATUS FOR USING RENDEZVOUS SERVER TO MAKE CONNECTIONS TO FIRE ALARM PANELS | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US2013/048151 | 27-Jun-2013 |            |             |
| R-FD-00048 | VERBAL-INTELLIGIBILITY ANALYZER FOR AUDIO ANNOUNCEMENT SYSTEMS                            | United States of America   | WESTMIN | Granted   | 13/432327         | 28-Mar-2012 | 9026439    | 05-May-2015 |
| R-FD-00050 | CURRENT REGULATED LED STROBE DRIVE CIRCUIT                                                | Australia                  | WESTMIN | Granted   | 2013277716        | 09-May-2013 | 2013277716 | 12-Oct-2017 |
| R-FD-00050 | Current regulated LED strobe drive circuit                                                | Australia                  | WESTMIN | Published | 2017235937        | 27-Sep-2017 |            |             |
| R-FD-00050 | CURRENT REGULATED LED STROBE DRIVE CIRCUIT                                                | European Patent Convention | WESTMIN | Published | 13726335.6        | 09-May-2013 |            |             |
| R-FD-00050 | CURRENT REGULATED LED STROBE DRIVE CIRCUIT                                                | United States of America   | WESTMIN | Granted   | 13/525427         | 18-Jun-2012 | 8796931    | 05-Aug-2014 |
| R-FD-00050 | CURRENT REGULATED LED STROBE DRIVE CIRCUIT                                                | United States of America   | WESTMIN | Granted   | 14/315721         | 26-Jun-2014 | 9345082    | 17-May-2016 |
| R-FD-00050 | CURRENT REGULATED LED STROBE DRIVE CIRCUIT                                                | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US2013/040290 | 09-May-2013 |            |             |

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| R-FD-00051 | DUCT DETECTOR WITH IMPROVED FUNCTIONAL TEST CAPABILITY                      | European Patent Convention | WESTMIN | Abandoned | 13158424.5      | 08-Mar-2013 |            |             |
| R-FD-00051 | DUCT DETECTOR WITH IMPROVED FUNCTIONAL TEST CAPABILITY                      | United States of America   | WESTMIN | Granted   | 13/422368       | 16-Mar-2012 | 8939013    | 27-Jan-2015 |
| R-FD-00052 | LED strobes with fixed pulse width                                          | Australia                  | WESTMIN | Granted   | 2013274534      | 11-Jun-2013 | 2013274534 | 18-May-2017 |
| R-FD-00052 | LED Strobes with Fixed Pulse Width                                          | European Patent Convention | WESTMIN | Published | 13731011.6      | 12-Jan-2015 |            |             |
| R-FD-00052 | LED STROBES WITH FIXED PULSE WIDTH                                          | United States of America   | WESTMIN | Granted   | 13/495559       | 13-Jun-2012 | 8760301    | 24-Jun-2014 |
| R-FD-00052 | LED STROBES WITH FIXED PULSE WIDTH                                          | United States of America   | WESTMIN | Granted   | 14/268862       | 02-May-2014 | 9053619    | 09-Jun-2015 |
| R-FD-00052 | LED STROBES WITH FIXED PULSE WIDTH                                          | Patent Cooperation Treaty  | WESTMIN | Published | PCT/US13/045101 | 11-Jun-2013 |            |             |
| R-FD-00054 | FIRE ALARM WITH INTEGRATED FIREFIGHTER COMMUNICATIONS SYSTEM                | United States of America   | WESTMIN | Granted   | 13/601585       | 31-Aug-2012 | 8693641    | 08-Apr-2014 |
| R-FD-00055 | METHOD AND APPARATUS FOR MONITORING TRANSIENT ELECTRICAL STRIKES            | United States of America   | WESTMIN | Granted   | 13/540690       | 03-Jul-2012 | 8890704    | 18-Nov-2014 |
| R-FD-00056 | NOTIFICATION APPLIANCE ENCLOSURE                                            | United States of America   | WESTMIN | Granted   | 13/610801       | 11-Sep-2012 | 8797724    | 05-Aug-2014 |
| R-FD-00057 | WIRE MANAGEMENT AND WIRE ENTRY COVER BRACKET                                | United States of America   | WESTMIN | Granted   | 13/780244       | 28-Feb-2013 | 9814157    | 07-Nov-2017 |
| R-FD-00059 | Methods for Inspecting and Testing Notification Appliances in Alarm Systems | European Patent Convention | WESTMIN | Published | 1470905.3       | 25-Feb-2014 |            |             |
| R-FD-00059 | METHODS FOR INSPECTING AND TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS | United States of America   | WESTMIN | Granted   | 13/836685       | 15-Mar-2013 | 9030314    | 12-May-2015 |

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| R-FD-00059 | METHODS FOR INSPECTING AND TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS                                          | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US14/018174 | 25-Feb-2014 |         |             |
| R-FD-00061 | Method for Self-testing Notification Appliances in Alarm Systems                                                     | European Patent Convention | WESTMIN | Published | EP14728788.2    | 15-May-2014 |         |             |
| R-FD-00061 | METHOD FOR SELF-TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS                                                     | United States of America   | WESTMIN | Granted   | 13/896906       | 17-May-2013 | 9007201 | 14-Apr-2015 |
| R-FD-00061 | METHOD FOR SELF-TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS                                                     | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US14/038033 | 15-May-2014 |         |             |
| R-FD-00062 | SYSTEM AND METHOD FOR VERIFYING ASSOCIATIONS BETWEEN INITIATING DEVICES AND NOTIFICATION APPLIANCES IN ALARM SYSTEMS | United States of America   | WESTMIN | Granted   | 13/921743       | 19-Jun-2013 | 9076316 | 07-Jul-2015 |
| R-FD-00064 | Method for Testing Notification Appliances in Alarm Systems                                                          | European Patent Convention | WESTMIN | Published | 14729097.7      | 15-Oct-2015 |         |             |
| R-FD-00064 | METHOD FOR TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS                                                          | United States of America   | WESTMIN | Granted   | 13/836942       | 15-Mar-2013 | 8994525 | 31-Mar-2015 |
| R-FD-00064 | METHOD FOR TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS                                                          | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US14/025838 | 13-Mar-2014 |         |             |
| R-FD-00065 | Method for Self-Testing Notification Appliances in Alarm Systems                                                     | European Patent Convention | WESTMIN | Published | 14714907.4      | 13-Mar-2014 |         |             |
| R-FD-00065 | METHOD FOR SELF-TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS                                                     | United States of America   | WESTMIN | Granted   | 13/836831       | 15-Mar-2013 | 9076313 | 07-Jul-2015 |

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| R-FD-00065 | METHOD FOR SELF-TESTING NOTIFICATION APPLIANCES IN ALARM SYSTEMS     | Patent Cooperation Treaty  | WESTMIN | Converted | PCT/US14/025829 | 13-Mar-2014 |            |             |
| R-FD-00066 | USER INTERFACE BROKER FOR FIRE ALARM SYSTEMS                         | United States of America   | WESTMIN | Granted   | 13/688441       | 29-Nov-2012 | 9076319    | 07-Jul-2015 |
| R-FD-00070 | ALARM SYSTEM NETWORK OPERATION                                       | United States of America   | WESTMIN | Granted   | 14/070896       | 04-Nov-2013 | 9374239    | 21-Jun-2016 |
| R-FD-00071 | CLOUD-BASED METHOD AND APPARATUS FOR CONFIGURING A FIRE PANEL        | United States of America   | WESTMIN | Published | 14/084721       | 20-Nov-2013 |            |             |
| R-FD-00072 | REAL TIME CONTROL CHART GENERATION AND MONITORING OF SAFETY SYSTEMS  | United States of America   | WESTMIN | Granted   | 13/835525       | 15-Mar-2013 | 9076321    | 07-Jul-2015 |
| R-FD-00074 | SYSTEM AND METHOD FOR USING CUSTOMER DATA NETWORKS FOR ALARM SYSTEMS | Australia                  | WESTMIN | Granted   | 2014202166      | 17-Apr-2014 | 2014202166 | 18-Dec-2017 |
| R-FD-00074 | System and method for using customer data networks for alarm systems | European Patent Convention | WESTMIN | Published | 14167268.3      | 06-May-2014 |            |             |
| R-FD-00074 | SYSTEM AND METHOD FOR USING CUSTOMER DATA NETWORKS FOR ALARM SYSTEMS | United States of America   | WESTMIN | Granted   | 13/889448       | 08-May-2013 | 9293031    | 22-Mar-2016 |
| R-FD-00075 | FIREFIGHTING SYSTEM AND METHOD OF OPERATION                          | United States of America   | WESTMIN | Expired   | 61/920314       | 23-Dec-2013 |            |             |
| R-FD-00076 | NOTIFICATION APPLIANCE ENCLOSURE                                     | United States of America   | WESTMIN | Granted   | 13/890351       | 09-May-2013 | 10044178   | 07-Aug-2018 |
| R-FD-00078 | Duct detector with remote airflow test capability                    | Australia                  | WESTMIN | Published | 2014221188      | 02-Sep-2014 |            |             |
| R-FD-00078 | Duct detector with remote airflow test capability                    | European Patent Convention | WESTMIN | Published | 14187206        | 30-Sep-2014 |            |             |

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| R-FD-00078 | DUCT DETECTOR WITH<br>REMOTE AIRFLOW TEST<br>CAPABILITY                    | United<br>States of<br>America   | WESTMIN | Granted   | 14/046157       | 04-<br>Oct-<br>2013 | 9459208 | 04-<br>Oct-<br>2016 |
| R-FD-00082 | USER INTERFACE<br>CONFIGURATION FOR<br>ALARM SYSTEMS                       | United<br>States of<br>America   | WESTMIN | Granted   | 14/095172       | 03-<br>Dec-<br>2013 | 9842486 | 12-<br>Dec-<br>2017 |
| SG-298     | EMERGENCY LIGHTING<br>SYSTEM WITH IMPROVED<br>MONITORING                   | United<br>States of<br>America   | WESTMIN | Expired   | 60/502338       | 12-<br>Sep-<br>2003 |         |                     |
| SG-298     | EMERGENCY LIGHTING<br>SYSTEM WITH IMPROVED<br>MONITORING                   | United<br>States of<br>America   | WESTMIN | Abandoned | 12/172014       | 11-<br>Jul-<br>2008 | 7999666 | 16-<br>Aug-<br>2011 |
| SG-298     | EMERGENCY LIGHTING<br>SYSTEM WITH IMPROVED<br>MONITORING                   | United<br>States of<br>America   | WESTMIN | Abandoned | 10/934711       | 03-<br>Sep-<br>2004 | 7400226 | 15-<br>Jul-<br>2008 |
| SG-299     | METHOD AND APPARATUS<br>FOR ASSIGNING ADDRESSES<br>TO ALARM SYSTEM DEVICES | European<br>Patent<br>Convention | WESTMIN | Abandoned | 04796855.7      | 10-<br>Jan-<br>2006 |         |                     |
| SG-299     | METHOD AND APPARATUS<br>FOR ASSIGNING ADDRESSES<br>TO ALARM SYSTEM DEVICES | United<br>States of<br>America   | WESTMIN | Expired   | 60/501333       | 08-<br>Sep-<br>2003 |         |                     |
| SG-299     | METHOD AND APPARATUS<br>FOR ASSIGNING ADDRESSES<br>TO ALARM SYSTEM DEVICES | United<br>States of<br>America   | WESTMIN | Abandoned | 10/936211       | 08-<br>Sep-<br>2004 |         |                     |
| SG-299     | METHOD AND APPARATUS<br>FOR ASSIGNING ADDRESSES<br>TO ALARM SYSTEM DEVICES | Patent<br>Cooperation<br>Treaty  | WESTMIN | Converted | PCT/US04/036221 | 29-<br>Oct-<br>2004 |         |                     |
| SG-300     | ALARM SYSTEM DEVICE                                                        | United<br>States of<br>America   | WESTMIN | Expired   | 60/502336       | 12-<br>Sep-<br>2003 |         |                     |
| SG-300     | ALARM SYSTEM DEVICE                                                        | United<br>States of<br>America   | WESTMIN | Abandoned | 10/939018       | 10-<br>Sep-<br>2004 |         |                     |
| SG-301     | PROGRAMMABLE<br>MULTICANDELA<br>NOTIFICATION DEVICE                        | United<br>States of<br>America   | WESTMIN | Expired   | 60/528952       | 11-<br>Dec-<br>2003 |         |                     |
| SG-301     | PROGRAMMABLE<br>MULTICANDELA<br>NOTIFICATION DEVICE                        | United<br>States of<br>America   | WESTMIN | Abandoned | 12/059671       | 31-<br>Mar-<br>2008 |         |                     |

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| SG-301 | PROGRAMMABLE MULTICANDELA NOTIFICATION DEVICE                    | United States of America  | WESTMIN | Granted   | 10/872852       | 21-Jun-2004 | 7369037 | 06-May-2008 |
| SG-302 | FIBER OPTIC MULTIPLEX MODEM                                      | United States of America  | WESTMIN | Abandoned | 12/496355       | 01-Jul-2009 | 8144736 | 27-Mar-2012 |
| SG-302 | FIBER OPTIC MULTIPLEX MODEM                                      | United States of America  | WESTMIN | Granted   | 13/369099       | 08-Feb-2012 | 8503491 | 06-Aug-2013 |
| SG-302 | FIBER OPTIC MULTIPLEX MODEM                                      | United States of America  | WESTMIN | Abandoned | 10/770249       | 02-Feb-2004 | 7570672 | 04-Aug-2009 |
| SG-305 | HAZARD AND THREAT ASSESSMENT SYSTEM                              | United States of America  | WESTMIN | Abandoned | 11/839319       | 15-Aug-2007 |         |             |
| SG-307 | ADDRESSABLE SMART SPEAKER                                        | United States of America  | WESTMIN | Granted   | 10/873027       | 21-Jun-2004 | 7170396 | 30-Jan-2007 |
| SG-307 | ADDRESSABLE SMART SPEAKER                                        | Patent Cooperation Treaty | WESTMIN | Abandoned | PCT/US05/010345 | 28-Mar-2005 |         |             |
| SG-308 | METHOD AND APPARATUS FOR DETERMINING MIS-WIRED ADDRESSABLE LOOPS | United States of America  | WESTMIN | Abandoned | 10/866584       | 12-Jun-2004 | 7251742 | 31-Jul-2007 |

| CaseNumber | Official Title                                                                            | CountryName              | Business Unit | Status    | Application # | Filing Date | Patent # | Issue Date  |
|------------|-------------------------------------------------------------------------------------------|--------------------------|---------------|-----------|---------------|-------------|----------|-------------|
| 16005      | DATA REGENERATION IN ASYNCHRONOUS NETWORK COMMUNICATION                                   | United Kingdom           | THORNSE       | Abandoned | 9608960.2     | 29-Apr-1996 | 2300336  | 13-Oct-1999 |
| 16005      | METHOD & APPARATUS FOR IMPROVING DATA REGENERATION IN ASYNCHRONOUS NETWORK COMMUNICATION. | United States of America | THORNSE       | Abandoned | 08/431093     | 28-Apr-1995 | 5659575  | 19-Aug-1997 |
| 16165      | IMPROVED FIRE ALARM DISPLAY                                                               | Australia                | THORNSE       | Expired   | 68044/90      | 14-Dec-1990 | 643476   | 18-Nov-1993 |
| 16165      | IMPROVED FIRE ALARM DISPLAY                                                               | Canada                   | THORNSE       | Abandoned | 2032778       | 20-Dec-1990 | 2032778  | 03-Dec-1996 |
| 16165      | IMPROVED FIRE ALARM DISPLAY                                                               | United States of America | THORNSE       | Expired   | 07/630079     | 19-Dec-1990 | 5189394  | 23-Feb-1993 |
| F-14001    | DETECTOR                                                                                  | United Kingdom           | THORNSE       | Granted   | 2048958       | 21-Jul-1995 | 2048958  | 29-Nov-1995 |
| F-14001    | DETECTOR                                                                                  | Singapore                | THORNSE       | Abandoned | 2048958       | 21-Jul-1995 | 2048958  | 21-Jul-1995 |
| F-14002    | FLAME DETECTOR                                                                            | United Kingdom           | THORNSE       | Abandoned | 2031954       | 23-Jun-1993 | 2031954  | 24-Feb-1994 |
| F-14002    | FLAME DETECTOR                                                                            | Singapore                | THORNSE       | Abandoned | 2031954       | 23-Jun-1993 | 2031954  | 23-Jun-1993 |
| F-14003    | LASER TESTING OF FIRE DETECTOR                                                            | Albania                  | THORNSE       | Abandoned |               |             |          |             |
| F-14003    | LASER TESTING OF FIRE DETECTOR                                                            | Switzerland              | THORNSE       | Granted   | 02726997.6    | 08-Jan-2002 | 1350235  | 15-Dec-2004 |



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|------------|-----------------------------------------------|----------------------------|---------|-----------|-----------------|-------------|----------|-------------|
| F-14003    | LASER TESTING OF FIRE DETECTOR                | Germany                    | THORNSE | Granted   | 02726997.6      | 08-Jan-2002 | 60202258 | 15-Dec-2005 |
| F-14003    | LASER TESTING OF FIRE DETECTOR                | European Patent Convention | THORNSE | Converted | 02726997.6      | 08-Jan-2002 | 1350235  | 15-Dec-2004 |
| F-14003    | LASER TESTING OF FIRE DETECTOR                | United Kingdom             | THORNSE | Granted   | 02726997.6      | 08-Jan-2002 | 1350235  | 15-Dec-2004 |
| F-14003    | LASER TESTING OF FIRE DETECTOR                | United Kingdom             | THORNSE | Abandoned | 0100429.0       | 08-Jan-2001 |          |             |
| F-14003    | LASER TESTING OF FIRE DETECTOR                | United States of America   | THORNSE | Abandoned | 10/250929       | 22-Oct-2003 | 7106187  | 12-Sep-2006 |
| F-14003    | LASER TESTING OF FIRE DETECTOR                | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB02/00054  | 08-Jan-2002 |          |             |
| F-14004    | FIRE DETECTOR IDENTIFICATION                  | Germany                    | THORNSE | Abandoned | 96925845.8      | 26-Jul-1996 | 0800694  | 24-May-2000 |
| F-14004    | FIRE DETECTOR IDENTIFICATION                  | European Patent Convention | THORNSE | Converted | 96925845.8      | 26-Jul-1996 | 0800694  | 24-May-2000 |
| F-14004    | FIRE DETECTOR IDENTIFICATION                  | France                     | THORNSE | Abandoned | 96925845.8      | 26-Jul-1996 | 0800694  | 24-May-2000 |
| F-14004    | FIRE DETECTOR IDENTIFICATION                  | United Kingdom             | THORNSE | Expired   | 96925845.8      | 26-Jul-1996 | 0800694  | 24-May-2000 |
| F-14004    | FIRE DETECTOR IDENTIFICATION                  | United Kingdom             | THORNSE | Abandoned | 9515391.2       | 27-Jul-1995 |          |             |
| F-14005    | A MONITORING SYSTEM                           | United Kingdom             | THORNSE | Abandoned | 9402232.4       | 05-Feb-1994 | 2286735  | 03-Feb-1998 |
| F-14006    | DETECTING THE PRESENCE OF A FIRE              | United Kingdom             | THORNSE | Expired   | 9318284.8       | 03-Sep-1993 | 2281615  | 22-Apr-1997 |
| F-14006    | DETECTING THE PRESENCE OF A FIRE              | United States of America   | THORNSE | Expired   | 08/298307       | 01-Sep-1994 | 5612537  | 18-Mar-1997 |
| F-14007    | FLAME DETECTOR                                | Canada                     | THORNSE | Expired   | 400420          | 02-Apr-1982 | 1191229  | 30-Jul-1985 |
| F-14007    | FLAME DETECTOR                                | European Patent Convention | THORNSE | Expired   | 82301746.2      | 01-Apr-1982 | 0064811  | 21-Sep-1988 |
| F-14007    | FLAME DETECTOR                                | United Kingdom             | THORNSE | Expired   | 82301746.2      | 01-Apr-1982 | 0064811  | 21-Sep-1988 |
| F-14007    | FLAME DETECTOR                                | United Kingdom             | THORNSE | Expired   | 8112052         | 16-Apr-1981 |          |             |
| F-14008    | SMOKE DETECTOR                                | United Kingdom             | THORNSE | Expired   | 8602126.8       | 29-Jan-1986 | 2170597  | 27-Jul-1988 |
| F-14009    | AMPLIFICATION CIRCUITS                        | Australia                  | THORNSE | Granted   | 18578/99        | 03-Mar-1999 | 758884   | 03-Mar-1999 |
| F-14009    | AMPLIFICATION CIRCUITS                        | United Kingdom             | THORNSE | Granted   | 9804514.9       | 03-Mar-1998 | 2335042  | 16-Oct-2001 |
| F-14009    | AMPLIFICATION CIRCUITS                        | United States of America   | THORNSE | Granted   | 09/261238       | 03-Mar-1999 | 6188278  | 13-Feb-2001 |
| F-14010    | A DETECTOR                                    | United Kingdom             | THORNSE | Abandoned | 9906197.0       | 17-Mar-1999 | 2335489  | 27-Feb-2002 |
| F-14010    | A DETECTOR                                    | United States of America   | THORNSE | Abandoned | 09/272377       | 19-Mar-1999 | 6255651  | 03-Jul-2001 |
| F-FD-00084 | Directionally Intelligent Firefighting system | United States of America   | THORNSE | Pending   | 61/916917       | 17-Dec-2013 |          |             |
| F-FD-00084 | Directionally Intelligent Firefighting system | Patent Cooperation Treaty  | THORNSE | Pending   | PCT/82014/06687 | 17-Dec-2014 |          |             |

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|------------|------------------------------------------------------------|----------------------------|---------|-----------|-------------------|-------------|----------------|-------------|
| F-FD-00084 | Directionally Intelligent Firefighting system              | Patent Cooperation Treaty  | THORNSE | Pending   | PCT/82014/066988  | 17-Dec-2014 |                |             |
| F-FD-00084 | Directionally Intelligent Firefighting system              | Patent Cooperation Treaty  | THORNSE | Pending   | PCT/82014/066988  | 17-Dec-2014 |                |             |
| F-FD-00128 |                                                            | Australia                  | THORNSE | Pending   | 2016335360        |             |                |             |
| F-FD-00128 | Smoke Detector Tester                                      | European Patent Convention | THORNSE | Pending   | 16781178.5        | 06-Oct-2016 |                |             |
| F-FD-00128 | Smoke Detector Tester                                      | United Kingdom             | THORNSE | Published | 1517651.4         | 06-Oct-2015 |                |             |
| F-FD-00128 | Smoke Detector Tester                                      | United States of America   | THORNSE | Pending   | 15/765324         | 02-Apr-2018 |                |             |
| F-FD-00128 | In situ Smoke Detector Tester                              | Patent Cooperation Treaty  | THORNSE | Published | PCT/GB2016/053120 | 06-Oct-2016 |                |             |
| F-FD-00156 |                                                            | United Arab Emirates       | THORNSE | Pending   | D6000314/2017     | 30-May-2017 |                |             |
| F-FD-00156 |                                                            | United Arab Emirates       | THORNSE | Pending   | D6000315/2017     | 30-May-2017 |                |             |
| F-FD-00156 |                                                            | United Arab Emirates       | THORNSE | Pending   | D6000316/2017     | 30-May-2017 |                |             |
| F-FD-00156 |                                                            | Australia                  | THORNSE | Pending   | 201713029         | 19-May-2017 |                |             |
| F-FD-00156 |                                                            | Australia                  | THORNSE | Pending   | 201713028         | 19-May-2017 |                |             |
| F-FD-00156 |                                                            | Australia                  | THORNSE | Pending   | 201713026         | 19-May-2017 |                |             |
| F-FD-00156 |                                                            | European Community         | THORNSE | Granted   | 003493139-0001    | 30-Nov-2016 | 003493139-0001 | 30-Nov-2016 |
| F-FD-00156 |                                                            | European Community         | THORNSE | Granted   | 003493139-0002    | 30-Nov-2016 | 003493139-0002 | 30-Nov-2016 |
| F-FD-00156 |                                                            | European Community         | THORNSE | Granted   | 00349319-0003     | 30-Nov-2016 | 00349319-0003  | 30-Nov-2016 |
| F-FD-00156 |                                                            | New Zealand                | THORNSE | Granted   | 423064            | 19-May-2017 | 423064         | 15-Jun-2017 |
| F-FD-00156 |                                                            | New Zealand                | THORNSE | Granted   | 423063            | 19-May-2017 | 423063         | 15-Jun-2017 |
| F-FD-00156 |                                                            | New Zealand                | THORNSE | Granted   | 423062            | 19-May-2017 | 423062         | 15-Jun-2017 |
| F-FD-00156 |                                                            | Saudi Arabia               | THORNSE | Pending   | 417380677         | 29-May-2017 |                |             |
| F-FD-00156 |                                                            | Saudi Arabia               | THORNSE | Pending   | 417380679         | 30-May-2017 |                |             |
| F-FD-00156 |                                                            | Saudi Arabia               | THORNSE | Pending   | 417380680         | 30-May-2017 |                |             |
| F-FD-00156 | Sounder, visual indicator, and visual alarm for alarm unit | United States of America   | THORNSE | Granted   | 29/590034         | 06-Jan-2017 | D805940        | 26-Dec-2017 |
| F-FD-00156 | Visual Indicator and Visual Alarm for alarm unit           | United States of America   | THORNSE | Pending   | 29/626311         | 16-Nov-2017 |                |             |
| F-FD-00156 | Visual alarm for alarm unit                                | United States of America   | THORNSE | Pending   | 29/626314         | 16-Nov-2017 |                |             |
| f-fd-00164 | Robotic Detector Test System                               | United States of America   | THORNSE | Abandoned | 62/407097         | 12-Oct-2016 |                |             |
| F-FD-00164 | Robotic Detector Test System                               | United States of America   | THORNSE | Expired   | 62/407178         | 12-Oct-2016 |                |             |
| F-FD-00164 | Robotic Detector Test System                               | Patent Cooperation Treaty  | THORNSE | Published | PCT/EP2017/076133 | 12-Oct-2017 |                |             |
| F-FD-00165 | Smoke Detector Remote Test Apparatus                       | United States of America   | THORNSE | Expired   | 62/407217         | 12-Oct-2016 |                |             |

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| F-FD-00165 | Smoke Detector Remote Test apparatus                          | Patent Cooperation Treaty  | THORNSE | Published | PCT/EP2017/076127 | 12-Oct-2017 |                   |             |
| F-FD-00169 | Smoke Detector Availability Test                              | United States of America   | THORNSE | Expired   | 62/487524         | 20-Apr-2017 |                   |             |
| F-FD-00169 |                                                               | United States of America   | THORNSE | Unfiled   |                   |             |                   |             |
| F-FD-00169 | Smoke Detector Availability Test                              | Patent Cooperation Treaty  | THORNSE | Pending   | EP2018/060175     | 20-Apr-2018 |                   |             |
| F-FD-00171 | Chamberless smoke detector false alarm minimization           | European Patent Convention | THORNSE | Pending   | 17190223.2        | 08-Sep-2017 |                   |             |
| F-FD-00171 | Chamberless Smoke Detector                                    | United States of America   | THORNSE | Pending   | 16/123724         | 6-Sep-18    |                   |             |
| F-FD-00179 | App for Providing Catalogue and Technical Support Information | United States of America   | THORNSE | Expired   | 62/491398         | 28-Apr-2017 |                   |             |
| F-FD-00192 | VAD Beacon                                                    | United Kingdom             | THORNSE | Pending   | 1804718.3         | 23-Mar-2018 |                   |             |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | Australia                  | THORNSE | Granted   | 2005239104        | 29-Apr-2005 | 2005239104        | 09-Jul-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | Switzerland                | THORNSE | Granted   | 05737836.6        | 29-Apr-2005 | 1743308           | 24-Jun-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | Germany                    | THORNSE | Granted   | 05737836.6        | 29-Apr-2005 | 602005015098.6-08 | 24-Jun-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | European Patent Convention | THORNSE | Granted   | 05737836.6        | 29-Apr-2005 | 1743308           | 24-Jun-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | France                     | THORNSE | Granted   | 05737836.6        | 29-Apr-2005 | 1743308           | 24-Jun-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | United Kingdom             | THORNSE | Granted   | 05737836.6        | 29-Apr-2005 | 1743308           | 24-Jun-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | United Kingdom             | THORNSE | Abandoned | 0409759.8         | 30-Apr-2004 |                   |             |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | United States of America   | THORNSE | Granted   | 11/587461         | 29-Apr-2005 | 7609154           | 27-Oct-2009 |
| F-TP-00019 | TESTING A FIRE DETECTOR SENSOR                                | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB05/001641   | 29-Apr-2005 |                   |             |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR        | Switzerland                | THORNSE | Granted   | 06702888.6        | 18-Jan-2006 | 1867039           | 31-Mar-2010 |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR        | Germany                    | THORNSE | Granted   | 06702888.6        | 18-Jan-2006 | 1867039           | 31-Mar-2010 |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR        | European Patent Convention | THORNSE | Granted   | 06702888.6        | 06-Apr-2005 | 1867039           | 31-Mar-2010 |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR        | France                     | THORNSE | Granted   | 06702888.6        | 18-Jan-2006 | 1867039           | 31-Mar-2010 |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR        | United Kingdom             | THORNSE | Granted   | 06702888.6        | 18-Jan-2006 | 1867039           | 31-Mar-2010 |

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| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR     | United Kingdom             | THORNSE | Abandoned | 0506989.3       | 06-Apr-2005 |                   |             |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR     | United States of America   | THORNSE | Granted   | 11/886611       | 06-Apr-2005 | 7633386           | 15-Dec-2009 |
| F-TP-00029 | AMPLIFIER FOR MULTI-USE OF SINGLE ENVIRONMENTAL SENSOR     | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB06/000162 | 18-Jan-2006 |                   |             |
| F-TP-00030 | DETECTION ARRANGEMENTS                                     | Australia                  | THORNSE | Granted   | 2005328223      | 12-Dec-2005 | 2005328223        | 23-Dec-2010 |
| F-TP-00030 | DETECTION ARRANGEMENTS                                     | Switzerland                | THORNSE | Granted   | 05818457.3      | 12-Dec-2005 | 1851857           | 13-Feb-2013 |
| F-TP-00030 | DETECTION ARRANGEMENTS                                     | Germany                    | THORNSE | Granted   | 05818457.3      | 12-Dec-2005 | 1851857           | 13-Feb-2013 |
| F-TP-00030 | DETECTION ARRANGEMENTS                                     | European Patent Convention | THORNSE | Granted   | 05818457.3      | 12-Dec-2005 | 1851857           | 13-Feb-2013 |
| F-TP-00030 | DETECTION ARRANGEMENTS                                     | France                     | THORNSE | Granted   | 05818457.3      | 12-Dec-2005 | 1851857           | 13-Feb-2013 |
| F-TP-00030 | DETECTION ARRANGEMENTS                                     | United Kingdom             | THORNSE | Granted   | 05818457.3      | 12-Dec-2005 | 1851857           | 13-Feb-2013 |
| F-TP-00030 | FIRE AND TOXIC GAS DETECTOR                                | United Kingdom             | THORNSE | Abandoned | 0503638.9       | 22-Feb-2005 |                   |             |
| F-TP-00030 | DETECTOR ARRANGEMENTS                                      | United States of America   | THORNSE | Granted   | 11/884507       | 12-Dec-2005 | 7843324           | 30-Nov-2010 |
| F-TP-00030 | Fire and Toxic Gas Detector                                | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB05/004793 | 12-Dec-2005 |                   |             |
| F-TP-00046 | Smoke Detector                                             | Australia                  | THORNSE | Granted   | 2005328222      | 12-Dec-2005 | 2005328222        | 07-Jan-2010 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | Switzerland                | THORNSE | Granted   | 05818487.0      | 12-Dec-2005 | 1851744           | 16-Jul-2008 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | Germany                    | THORNSE | Granted   | 05818487.0      | 12-Dec-2005 | 602005008284.0-08 | 16-Jul-2008 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | European Patent Convention | THORNSE | Granted   | 05818487.0      | 12-Dec-2005 | 1851744           | 16-Jul-2008 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | France                     | THORNSE | Granted   | 05818487.0      | 12-Dec-2005 | 1851744           | 16-Jul-2008 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | United Kingdom             | THORNSE | Granted   | 05818487.0      | 12-Dec-2005 | 1851744           | 16-Jul-2008 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | United Kingdom             | THORNSE | Abandoned | 0503637.1       | 22-Feb-2005 |                   |             |

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|------------|------------------------------------------------------------|----------------------------|---------|-----------|-------------------|-------------|-------------------|-------------|
| F-TP-00046 | SMOKE DETECTOR                                             | United States of America   | THORNSE | Granted   | 11/884291         | 12-Dec-2005 | 7940190           | 10-May-2011 |
| F-TP-00046 | OPTICAL SMOKE CHAMBER MONITORING USING SPECULAR REFLECTION | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB05/004792   | 12-Dec-2005 |                   |             |
| F-TP-00054 | DETECTOR                                                   | Australia                  | THORNSE | Granted   | 2006251046        | 17-Feb-2006 | 2006251046        | 03-Mar-2011 |
| F-TP-00054 | DETECTOR                                                   | Germany                    | THORNSE | Expired   | 20 2006 021 270.1 | 17-Feb-2006 | 20 2006 021 270.1 | 19-May-2014 |
| F-TP-00054 | Detector                                                   | European Patent Convention | THORNSE | Published | 06709808.7        | 17-Feb-2006 |                   |             |
| F-TP-00054 | WINDOW CLEANLINESS DETECTION SYSTEM                        | United Kingdom             | THORNSE | Abandoned | 0510916.0         | 27-May-2005 |                   |             |
| F-TP-00054 | WINDOW CLEANLINESS DETECTION SYSTEM                        | United States of America   | THORNSE | Granted   | 11/921113         | 17-Feb-2006 | 7948628           | 24-May-2011 |
| F-TP-00054 | WINDOW CLEANLINESS DETECTION SYSTEM                        | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB06/000572   | 17-Feb-2006 |                   |             |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | Australia                  | THORNSE | Granted   | 2006251047        | 17-Feb-2006 | 2006251047        | 08-Sep-2011 |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | Switzerland                | THORNSE | Abandoned | 06709817.8        | 17-Feb-2006 | 1894178           | 24-Sep-2008 |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | Germany                    | THORNSE | Abandoned | 06709817.8        | 17-Feb-2006 | 602006002891.1-08 | 24-Sep-2008 |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | European Patent Convention | THORNSE | Abandoned | 06709817.8        | 17-Feb-2006 | 1894178           | 24-Sep-2008 |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | France                     | THORNSE | Abandoned | 06709817.8        | 17-Feb-2006 | 1894178           | 24-Sep-2008 |
| F-TP-00055 | FLAME DETECTOR ALARM SELF-TEST SYSTEM                      | United Kingdom             | THORNSE | Abandoned | 0510917.8         | 27-May-2005 |                   |             |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | United Kingdom             | THORNSE | Abandoned | 06709817.8        | 17-Feb-2006 | 1894178           | 24-Sep-2008 |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | United States of America   | THORNSE | Granted   | 11/921111         | 17-Feb-2006 | 7956329           | 07-Jun-2011 |
| F-TP-00055 | A FLAME DETECTOR AND A METHOD                              | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB06/000581   | 17-Feb-2006 |                   |             |
| F-TP-00068 | METHODS AND SYSTEMS FOR GAS DETECTION                      | United States of America   | THORNSE | Expired   | 60/777161         | 27-Feb-2006 |                   |             |
| F-TP-00068 | METHODS AND SYSTEMS FOR GAS DETECTION                      | United States of America   | THORNSE | Abandoned | 11/708172         | 20-Feb-2007 |                   |             |
| F-TP-00068 | Methods and Systems for Gas Detection                      | Patent Cooperation Treaty  | THORNSE | Abandoned | PCT/GB07/000634   | 23-Feb-2007 |                   |             |
| F-TP-00117 | A Detector                                                 | European Patent Convention | THORNSE | Published | 07824656.8        | 20-Nov-2007 |                   |             |
| F-TP-00117 | SENSOR TEMPERATURE CONTROL SYSTEM                          | United Kingdom             | THORNSE | Abandoned | 0702284.1         | 06-Feb-2007 |                   |             |
| F-TP-00117 | A DETECTOR                                                 | United States of America   | THORNSE | Granted   | 12/525928         | 20-Nov-2007 | 9134180           | 15-Sep-2015 |
| F-TP-00117 | SENSOR TEMPERATURE CONTROL SYSTEM                          | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB07/004444   | 20-Nov-2007 |                   |             |

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| F-TP-00118 | IDENTIFYING A PLURALITY OF DEVICES                                                                | European Patent Convention | THORNSE | Published | 08775960.1      | 16-Jul-2008 |                   |             |
| F-TP-00118 | IDENTIFYING A PLURALITY OF DEVICES                                                                | United Kingdom             | THORNSE | Abandoned | 0713770.6       | 16-Jul-2007 |                   |             |
| F-TP-00118 | IDENTIFYING A PLURALITY OF DEVICES                                                                | United States of America   | THORNSE | Abandoned | 12/688531       | 16-Jul-2008 | 8232869           | 31-Jul-2012 |
| F-TP-00118 | IDENTIFYING A PLURALITY OF DEVICES                                                                | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB08/002424 | 16-Jul-2008 |                   |             |
| F-TP-00156 | Detector                                                                                          | European Patent Convention | THORNSE | Abandoned | 08718684.7      | 11-Mar-2008 |                   |             |
| F-TP-00156 | Detector                                                                                          | United Kingdom             | THORNSE | Abandoned | 0704847.3       | 13-Mar-2007 |                   |             |
| F-TP-00156 | Detector                                                                                          | United States of America   | THORNSE | Granted   | 12/530241       | 11-Mar-2008 | 8154415           | 10-Apr-2012 |
| F-TP-00156 | Detector                                                                                          | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB08/000838 | 11-Mar-2008 |                   |             |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | Switzerland                | THORNSE | Granted   | 08718718.3      | 13-Mar-2008 | 2140435           | 24-Oct-2012 |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | Germany                    | THORNSE | Granted   | 08718718.3      | 13-Mar-2008 | 2140435           | 24-Oct-2012 |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | European Patent Convention | THORNSE | Granted   | 08718718.3      | 13-Mar-2008 | 2140435           | 24-Oct-2012 |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | France                     | THORNSE | Granted   | 08718718.3      | 13-Mar-2008 | 2140435           | 24-Oct-2012 |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | United Kingdom             | THORNSE | Granted   | 08718718.3      | 13-Mar-2008 | 2140435           | 24-Oct-2012 |
| F-TP-00157 | USING RESISTORS IN A FIRE DETECTOR TO INDICATE THE LIFE SPAN OR MANUFACTURING DATE OF EACH SENSOR | United Kingdom             | THORNSE | Abandoned | 0705888.6       | 27-Mar-2007 |                   |             |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | United States of America   | THORNSE | Granted   | 12/568423       | 28-Sep-2009 | 8198997           | 12-Jun-2012 |
| F-TP-00157 | FIRE GAS DETECTOR-CODING                                                                          | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB08/000876 | 13-Mar-2008 |                   |             |
| F-TP-00189 | A MONITORING METHOD                                                                               | European Patent Convention | THORNSE | Abandoned | 08737128.2      | 24-Apr-2008 |                   |             |
| F-TP-00189 | A Monitoring Method                                                                               | United Kingdom             | THORNSE | Abandoned | 0708219.1       | 27-Apr-2007 |                   |             |
| F-TP-00189 | A MONITORING METHOD                                                                               | United States of America   | THORNSE | Abandoned | 12/596802       | 24-Apr-2008 |                   |             |
| F-TP-00189 | A MONITORING METHOD                                                                               | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB08/001487 | 24-Apr-2008 |                   |             |
| F-TP-00245 | GAS SENSOR OPERATION WITH FEEDBACK CONTROL                                                        | United Kingdom             | THORNSE | Abandoned | 0716399.1       | 22-Aug-2007 |                   |             |
| F-TP-00245 | GAS SENSOR OPERATION WITH FEEDBACK CONTROL                                                        | Patent Cooperation Treaty  | THORNSE | Abandoned | PCT/GB08/002804 | 15-Aug-2008 |                   |             |
| R-FD-00002 | A PARTICULATE DETECTOR                                                                            | Australia                  | THORNSE | Granted   | 2009299563      | 01-Oct-2009 | 2009299563        | 18-Jun-2015 |
| R-FD-00002 |                                                                                                   | Germany                    | THORNSE | Granted   |                 |             | 60 2009 050 008.2 |             |

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| R-FD-00002 | A PARTICULATE DETECTOR                                  | European Patent Convention | THORNSE | Published | 09785183.6        | 01-Oct-2009 |                   |             |
| R-FD-00002 | A PARTICULATE DETECTOR                                  | France                     | THORNSE | Published | 09785183.6        | 01-Oct-2009 |                   |             |
| R-FD-00002 | TIME RESOLVED OPTICAL WAVELENGTH FILTERING              | United Kingdom             | THORNSE | Abandoned | 0817972.3         | 01-Oct-2008 |                   |             |
| R-FD-00002 | A PARTICULATE DETECTOR                                  | United States of America   | THORNSE | Granted   | 13/121467         | 01-Oct-2009 | 8559006           | 15-Oct-2013 |
| R-FD-00002 | A PARTICULATE DETECTOR                                  | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB09/002339   | 01-Oct-2009 |                   |             |
| R-FD-00015 | DETECTOR DEVICES                                        | European Patent Convention | THORNSE | Published | 11711112.0        | 11-Feb-2011 |                   |             |
| R-FD-00015 |                                                         | United Kingdom             | THORNSE | Abandoned | 1002336.4         | 11-Feb-2010 |                   |             |
| R-FD-00015 | DETECTOR DEVICES                                        | United States of America   | THORNSE | Granted   | 13/578522         | 11-Feb-2011 | 9286778           | 15-Mar-2016 |
| R-FD-00015 | DETECTOR DEVICES                                        | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB11/000189   | 11-Feb-2011 |                   |             |
| R-FD-00029 | FIRE DETECTION BY SENSING FLUORESCENCE OF FIRE PRODUCTS | Australia                  | THORNSE | Granted   | 2013220147        | 13-Feb-2013 | 2013220147        | 29-Jul-2016 |
| R-FD-00029 | Combustion Product Detection                            | Germany                    | THORNSE | Granted   | 13706679.1        | 13-Feb-2013 | 602013021938.9    | 07-Jun-2017 |
| R-FD-00029 | Combustion Product Detection                            | European Patent Convention | THORNSE | Granted   | 13706679.1        | 13-Feb-2013 | EP2815388 B2      | 07-Jun-2017 |
| R-FD-00029 | Combustion Product Detection                            | France                     | THORNSE | Granted   | 13706679.1        | 13-Feb-2013 | EP2815388 B2      | 07-Jun-2017 |
| R-FD-00029 | FIRE DETECTION BY SENSING FLUORESCENCE OF FIRE PRODUCTS | United Kingdom             | THORNSE | Granted   | 13706679.1        | 13-Feb-2013 | EP2815388 B2      | 07-Jun-2017 |
| R-FD-00029 | FIRE DETECTION BY SENSING FLUORESCENCE OF FIRE PRODUCTS | United Kingdom             | THORNSE | Abandoned | 1202447.7         | 13-Feb-2012 |                   |             |
| R-FD-00029 | Combustion Product Detection                            | United States of America   | THORNSE | Published | 14/364080         | 13-Feb-2013 |                   |             |
| R-FD-00029 | FIRE DETECTION BY SENSING FLUORESCENCE OF FIRE PRODUCTS | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB2013/050332 | 13-Feb-2013 |                   |             |
| R-FD-00033 | MOUNTING UNIT                                           | Australia                  | THORNSE | Granted   | 2011309880        | 03-Oct-2011 | 2011309880        | 07-Jan-2016 |
| R-FD-00033 | MOUNTING UNIT                                           | Germany                    | THORNSE | Granted   | 11773112.5        | 01-May-2013 | 60 2011 028 601.3 | 27-Jul-2016 |
| R-FD-00033 | MOUNTING UNIT                                           | European Patent Convention | THORNSE | Granted   | 11773112.5        | 03-Oct-2011 | EP2622696         | 27-Jul-2016 |
| R-FD-00033 |                                                         | France                     | THORNSE | Expired   | 1177311.5         | 01-May-2013 | 2622696           | 27-Jul-2016 |
| R-FD-00033 | CEILING TILE ADAPTER                                    | United Kingdom             | THORNSE | Abandoned | 1016564.5         | 01-Oct-2010 |                   |             |
| R-FD-00033 |                                                         | United Kingdom             | THORNSE | Granted   | 11773112.5        |             | 2622696           | 27-Jul-2016 |
| R-FD-00033 | MOUNTING UNIT                                           | United States of America   | THORNSE | Granted   | 13/877038         | 03-Oct-2011 | 9343884           | 17-May-2016 |
| R-FD-00033 | MOUNTING UNIT                                           | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB11/001440   | 03-Oct-2011 |                   |             |

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| R-FD-00034 | SAFETY SYSTEM             | Australia                  | THORNSE | Granted   | 2011311359      | 04-Oct-2011 | 201131           | 07-May-2015 |
| R-FD-00034 | Safety System             | European Patent Convention | THORNSE | Published | 11785048.7      | 04-Oct-2011 |                  |             |
| R-FD-00034 | DATA STORAGE IN DETECTOR  | United Kingdom             | THORNSE | Abandoned | 1016685.8       | 04-Oct-2010 |                  |             |
| R-FD-00034 | SAFETY SYSTEM             | United States of America   | THORNSE | Granted   | 13/877312       | 04-Oct-2011 | 9391714          | 12-Jul-2016 |
| R-FD-00034 |                           | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB11/001443 | 04-Oct-2011 |                  |             |
| R-FD-00035 | DETECTOR SYSTEM           | Australia                  | THORNSE | Granted   | 2011311361      | 04-Oct-2011 | 2011311361       | 28-May-2015 |
| R-FD-00035 | Detector system           | Australia                  | THORNSE | Granted   | 2015200391      | 28-Jan-2015 | 2015200391       | 23-Feb-2017 |
| R-FD-00035 | Detector system           | Australia                  | THORNSE | Granted   | 2015200392      | 28-Jan-2015 | AU 2015200392 B2 |             |
| R-FD-00035 | DETECTOR SYSTEM           | Germany                    | THORNSE | Granted   | 11788548.3      | 03-May-2013 | 602011034512.5   | 18-Jan-2017 |
| R-FD-00035 | DETECTOR SYSTEM           | European Patent Convention | THORNSE | Granted   | 11788548.3      | 04-Oct-2011 | EP2625680 B1     | 18-Jan-2017 |
| R-FD-00035 | DETECTOR SYSTEM           | European Patent Convention | THORNSE | Published | 17150897.1      | 10-Jan-2017 |                  |             |
| R-FD-00035 | DETECTOR SYSTEM           | European Patent Convention | THORNSE | Published | 17150899.7      | 10-Jan-2017 |                  |             |
| R-FD-00035 | DETECTOR SYSTEM           | France                     | THORNSE | Granted   | 11788548.3      | 03-May-2013 | EP2625680 B1     | 18-Jan-2017 |
| R-FD-00035 | IR DETECTOR COMMUNICATION | United Kingdom             | THORNSE | Abandoned | 1016681.7       | 04-Oct-2010 |                  |             |
| R-FD-00035 | Detector System           | United States of America   | THORNSE | Granted   | 13/877045       | 04-Oct-2011 | 9847019          | 19-Dec-2017 |
| R-FD-00035 |                           | United States of America   | THORNSE | Published | 15/810428       | 13-Nov-2017 |                  |             |
| R-FD-00035 |                           | United States of America   | THORNSE | Published | 15/810449       | 13-Nov-2017 |                  |             |
| R-FD-00035 |                           | United States of America   | THORNSE | Published | 15/810460       | 13-Nov-2017 |                  |             |
| R-FD-00035 |                           | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB11/001445 | 04-Oct-2011 |                  |             |
| R-FD-00036 | ISOLATOR CIRCUIT          | Australia                  | THORNSE | Granted   | 2011311360      | 04-Oct-2011 | 2011311360       | 03-Sep-2015 |
| R-FD-00036 |                           | Australia                  | THORNSE | Granted   | 2015101024      | 30-Jul-2015 | 2015101024       | 27-Aug-2015 |
| R-FD-00036 | ISOLATOR CIRCUIT          | European Patent Convention | THORNSE | Published | 11784733.5      | 04-Oct-2011 |                  |             |
| R-FD-00036 | ISOLATOR CIRCUIT          | United Kingdom             | THORNSE | Abandoned | 1016684.1       | 04-Oct-2010 |                  |             |
| R-FD-00036 | ISOLATOR CIRCUIT          | United States of America   | THORNSE | Granted   | 13/877056       | 04-Oct-2011 | 9153968          | 06-Oct-2015 |
| R-FD-00036 | Isolator Circuit          | United States of America   | THORNSE | Granted   | 14/831977       | 21-Aug-2015 | 9673615          | 06-Jun-2017 |
| R-FD-00036 | Isolator Circuit          | United States of America   | THORNSE | Published | 15/058623       | 02-Mar-2016 |                  |             |
| R-FD-00036 |                           | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB11/001444 | 04-Oct-2011 |                  |             |
| R-FD-00038 | FIRE DETECTOR UNIT        | United Kingdom             | THORNSE | Granted   | 1101360.4       | 26-Jan-2011 | 2487560          | 04-Sep-2013 |
| R-FD-00038 | FIRE DETECTOR UNIT        | Patent Cooperation Treaty  | THORNSE | Abandoned | PCT/GB12/050162 | 26-Jan-2012 |                  |             |



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| R-FD-00043 | Fire detector drift compensation                                   | Australia                  | THORNSE | Published | 2016259176        | 29-Apr-2016 |            |             |
| R-FD-00043 |                                                                    | European Patent Convention | THORNSE | Published | 16721881.7        | 01-Dec-2017 |            |             |
| R-FD-00043 |                                                                    | United Kingdom             | THORNSE | Granted   | 1507574.0         | 01-May-2015 | GB2537940  | 16-Jan-2018 |
| R-FD-00043 | Fire Detector Drift Compensation                                   | United States of America   | THORNSE | Published | 15/570804         | 29-Apr-2016 |            |             |
| R-FD-00043 |                                                                    | Patent Cooperation Treaty  | THORNSE | Published | PCT/GB2016/051249 | 29-Apr-2016 |            |             |
| R-FD-00049 | Interface circuit for distributed fire alarm in loop configuration | Australia                  | THORNSE | Granted   | 2013328423        | 08-Oct-2013 | 2013328423 | 20-Apr-2017 |
| R-FD-00049 | INTERFACE CIRCUIT FOR DISTRIBUTED FIRE ALARM IN LOOP CONFIGURATION | European Patent Convention | THORNSE | Published | 13774772.1        | 08-Oct-2013 |            |             |
| R-FD-00049 | REDUNCANT COMMUNICATIONS-NBUS CONCEPT                              | United Kingdom             | THORNSE | Published | 1217970.1         | 08-Oct-2012 |            |             |
| R-FD-00049 | INTERFACE CIRCUIT FOR DISTRIBUTED FIRE ALARM IN LOOP CONFIGURATION | United States of America   | THORNSE | Granted   | 14/432703         | 08-Oct-2013 | 9514635    | 06-Dec-2016 |
| R-FD-00049 | INTERFACE CIRCUIT FOR DISTRIBUTED FIRE ALARM IN LOOP CONFIGURATION | Patent Cooperation Treaty  | THORNSE | Converted | PCT/GB2013/052618 | 08-Oct-2013 |            |             |
| R-FD-00079 | Alarm Panel                                                        | European Patent Convention | THORNSE | Published | 14799875.1        | 17-Nov-2014 |            |             |
| R-FD-00079 | ALARM PANEL                                                        | United Kingdom             | THORNSE | Published | 1320344.3         | 18-Nov-2013 |            |             |
| R-FD-00079 | ALARM PANEL                                                        | United States of America   | THORNSE | Published | 15/037085         | 17-Nov-2014 |            |             |
| R-FD-00079 |                                                                    | Patent Cooperation Treaty  | THORNSE | Published | PCT/GB2014/053396 | 17-Nov-2014 |            |             |
| R-FD-00081 | Control panel for a fire detection system                          | European Patent Convention | THORNSE | Published | 14195284.6        | 27-Nov-2014 |            |             |
| R-FD-00081 | CONTROL PANEL FOR A FIRE DETECTION SYSTEM                          | United Kingdom             | THORNSE | Abandoned | 1321139.6         | 29-Nov-2013 |            |             |

| CaseNumber | Official Title                                                                    | CountryName              | Business Unit | Status  | Application # | Filing Date | Patent # | Issue Date  |
|------------|-----------------------------------------------------------------------------------|--------------------------|---------------|---------|---------------|-------------|----------|-------------|
| N-SG-00011 | STROBE NOTIFICATION APPLIANCE WITH DIRECTIONAL INFORMATION                        | United States of America | ELEC-TR       | Granted | 15/004420     | 22-Jan-2016 | 9922509  | 20-Mar-2018 |
| N-SG-00011 |                                                                                   | United States of America | ELEC-TR       | Pending | 15/923213     | 16-Mar-2018 |          |             |
| N-SG-00013 | Hardwire Fire Alarm Panel Walktest Decoder                                        | United States of America | SIMPGRN       | Pending | 15/633111     | 26-Jun-2017 |          |             |
| N-SG-00014 | Building Occupancy Beacon                                                         | United States of America | SIMPGRN       | Expired | 62/491402     | 28-Apr-2017 |          |             |
| N-SG-00015 | Method and Apparatus for Cloud Based Predictive Service Scheduling and Evaluation | United States of America | SIMPGRN       | Pending | 15/707135     | 18-Sep-2017 |          |             |

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| N-SG-00016 | Method and System for Service Verification Using Access Control System                          | United States of America   | SIMPGRN       | Pending   | 15/707142       | 18-Sep-2017 |           |             |
| N-SG-00017 | Method and System for Service Verification Using WiFi Signal Strength Mapping                   | United States of America   | SIMPGRN       | Pending   | 15/707148       | 18-Sep-2017 |           |             |
| N-SG-00018 | Method and Apparatus for Mapping Devices by Using Posted Maps                                   | United States of America   | SIMPGRN       | Pending   | 15/707154       | 18-Sep-2017 |           |             |
| N-SG-00019 | Method and Apparatus for Verifying Service of Installed Devices Using RFID                      | United States of America   | SIMPGRN       | Pending   | 15/707161       | 18-Sep-2017 |           |             |
| N-SG-00020 | Method and apparatus for Evaluation of Temperature Sensors                                      | United States of America   | SIMPGRN       | Pending   | 15/707167       | 18-Sep-2017 |           |             |
|            |                                                                                                 |                            |               |           |                 |             |           |             |
| CaseNumber | Official Title                                                                                  | CountryName                | Business Unit | Status    | Application #   | Filing Date | Patent #  | Issue Date  |
| V-SG-00002 |                                                                                                 | United States of America   | ELEC-TR       | Expired   | 61/245818       | 25-Sep-2009 |           |             |
| V-SG-00004 | STROBE TOOL                                                                                     | United States of America   | ELEC-TR       | Expired   | 61/324921       | 16-Apr-2010 |           |             |
| V-SG-00004 | VISUAL NOTIFICATION TOOL                                                                        | United States of America   | ELEC-TR       | Abandoned | 13/087801       | 15-Apr-2011 |           |             |
| V-SG-00005 | SYSTEM AND METHOD FOR MONITORING USAGE AND PREDICTING FAILURE OF VISUAL NOTIFICATION APPLIANCES | United States of America   | ELEC-TR       | Granted   | 13/173032       | 30-Jun-2011 | 8797157   | 05-Aug-2014 |
| V-SG-00006 | IMPROVED ELEVATOR INTERFACE                                                                     | European Patent Convention | ELEC-TR       | Published | 12804617.4      | 27-Jun-2012 |           |             |
| V-SG-00006 | ELEVATOR INTERFACE                                                                              | United States of America   | ELEC-TR       | Granted   | 13/173049       | 30-Jun-2011 | 8794389   | 05-Aug-2014 |
| V-SG-00006 | IMPROVED ELEVATOR INTERFACE                                                                     | Patent Cooperation Treaty  | ELEC-TR       | Converted | PCT/US12/044379 | 27-Jun-2012 |           |             |
| V-SG-00008 | SPRINKLER DROP RULER                                                                            | Canada                     | SPRINK        | Granted   | 2790596         | 24-Sep-2012 | 2790596 B | 13-Sep-2016 |
| V-SG-00008 | SPRINKLER DROP RULER                                                                            | United States of America   | SPRINK        | Granted   | 13/325724       | 14-Dec-2011 | 8601700   | 10-Dec-2013 |

| CaseNumber | Official Title | CountryName | Status | Application # | Filing Date | Patent # | Issue Date |
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| D-FD-00199 | Indoor Positioning System for Fire Alarm System                     | United States of America | Pending | 15/953627 | 16-Apr-2018 |  |  |
| D-FD-00200 | Systems and Methods of Alarm Controls and Directed Audio Evacuation | United States of America | Pending | 62/679323 | 01-Jun-2018 |  |  |
| F-FD-00197 | Smoke Sensor with Test Switch and Method of Operation Thereof       | United States of America | Pending | 16/004766 | 11-Jun-2018 |  |  |

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| F-TP-00174 | TUNING<br>ALGORIGHM FOR<br>CLOCK SOURCE<br>FREQUENCY<br>DRIFT                                                                            | United States<br>of America | Abandoned | 11/999593 | 06-Dec-2007     | 7667577 | 23-Feb-2010 |
| F-TP-00287 | SELF-DRAINING<br>GRILL AND<br>SYSTEM<br>INCORPORATING<br>THE SAME                                                                        | United States<br>of America | Abandoned | 12/054573 | 25-Mar-<br>2008 | 7886868 | 15-Feb-2011 |
| R-FD-00001 | OPTICAL<br>ELEMENT<br>DRIVING CIRCUIT<br>COMPENSATION<br>CIRCUIT FOR<br>CURRENT<br>PEAKING<br>REDUCTION IN<br>NOTIFICATION<br>APPLIANCES | United States<br>of America | Granted   | 12/256066 | 22-Oct-2008     | 7994729 | 09-Aug-2011 |
| R-FD-00020 | COMPENSATION<br>CIRCUIT FOR<br>CURRENT<br>PEAKING<br>REDUCTION IN<br>NOTIFICATION<br>APPLIANCES                                          | United States<br>of America | Granted   | 13/005704 | 13-Jan-2011     | 8354798 | 15-Jan-2013 |
| R-FD-00020 | COMPENSATION<br>CIRCUIT FOR<br>CURRENT<br>PEAKING<br>REDUCTION IN<br>NOTIFICATION<br>APPLIANCES                                          | United States<br>of America | Granted   | 13/709180 | 10-Dec-2012     | 8558472 | 15-Oct-2013 |