## UNITED STATES INTERNATIONAL TRADE COMMISSION WASHINGTON, D.C.

In the Matter of

## CERTAIN INDUSTRIAL CONTROL SYSTEM SOFTWARE, SYSTEMS USING SAME, AND COMPONENTS THEREOF

Investigation No. 337-TA-\_\_\_\_

## COMPLAINT UNDER SECTION 337 OF THE TARIFF ACT OF 1930, AS AMENDED

#### **Complainant**

Rockwell Automation, Inc. 1201 South 2<sup>nd</sup> Street Milwaukee, Wisconsin 53204-2410 Tel: (414) 382-8584 Fax: (414) 382-4013

#### **Counsel for Complainant**

Paul J. Tanck Gregory J. Carbo Neal J. McLaughlin CHADBOURNE & PARKE LLP 1301 Avenue of the Americas New York, NY 10019 Tel: (212) 408-5100 Fax: (212) 541-5369

#### **Proposed Respondents**

3S-Smart Software Solutions, GmbH Memminger Str. 151 87439 Kempten, Germany Tel: 49-831-54031-0 Fax: 49-831-54031-50

Advantech Corporation 380 Fairview Way Milpitas, CA 95035 Tel: (408) 519-3898 Fax: (408) 519-3899

Advantech Co., Ltd. No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei City, Taiwan Tel: (02)2792-7818

David F. Nickel James B. Altman Matthew N. Duescher FOSTER, MURPHY, ALTMAN & NICKEL, PC 1899 L Street, NW, Suite 1150 Washington, DC 20036 Tel: (202) 822-4100 Fax: (202) 822-4199

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<sup>&</sup>lt;sup>1</sup> Certified copies of the assignment records for the eight asserted patents have been ordered from the U.S. Patent and Trademark Office, but complete records have not been received by counsel for Complainant at the time of filing. We will provide replacement certified copies of these assignment records as soon as we receive them.

19	Infringement claim charts for U.S. Patent No. 6,816,817	
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N	Cited References for U.S. Patent No. 7,693,585	
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<sup>&</sup>lt;sup>2</sup> Certified copies of the file histories for U.S. Patent Nos. 6,819,960, 7,650,196 and 8,799,800 have been ordered from the U.S. Patent and Trademark Office, but have not been received by counsel for Complainant at the time of filing. Complainant will provide replacement certified copies of these three file histories as soon as we receive them.

#### I. INTRODUCTION

1. Complainant Rockwell Automation, Inc. ("Rockwell" or "Complainant") respectfully requests that the United States International Trade Commission ("Commission") institute an investigation into violations of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("Section 337") regarding certain industrial control system software, systems using same, and components thereof by Respondent 3S-Smart Software Solutions, GmbH ("3S") and Respondents Advantech Corporation and Advantech Co., Ltd. (collectively, "Advantech"), all of whom are referred to herein collectively as "Respondents".

2. Rockwell, which is headquartered in Milwaukee, Wisconsin, is the world's largest company dedicated to industrial automation and information, and is a leader in the production and development of motion control products and solutions, as well as information platforms and software applications. Rockwell sells an array of products and solutions in connection with its industrial control systems, such as drives and motors, programmable automation controllers, sensors of all types (e.g. to measure weight, position, temperature, etc.), human machine interfaces ("HMIs"), power control products and power supplies, safety control devices, and post-sale maintenance and support devices.

3. Rockwell's core business is built around its industrial automation systems-related products and software, with products conceived, designed and built in the United States. Rockwell has invested substantially in the United States in designing, developing, manufacturing, selling and supporting numerous industrial control systems and software and related products, such as its ControlLogix® industrial controllers and PanelView HMI products and firmware, and its RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, FactoryTalk® and RSView® software (collectively, the "Domestic Industry Products"). (*See* Exs. 43-55.) Rockwell's innovative, novel products and software technologies for industrial control systems allow for the

automation and control of machines, factories and other industrial systems that provide for manufacturing of countless products, safe generation of energy, and efficient transportation of goods throughout the United States and the world.

4. Rockwell has a significant patent portfolio covering its novel industrial control systems and software, which provide the ability to automate and visualize complex industrial tasks safely and efficiently. This portfolio includes U.S. Patent Nos. 6,675,226 ("the '226 patent"), 6,816,817 ("the '817 patent"), 6,819,960 ("the '960 patent"), 6,978,225 ("the '225 patent"), 7,130,704 ("the '704 patent"), 7,650,196 ("the '196 patent"), 7,693,585 ("the '585 patent") and 8,799,800 ("the '800 patent") (collectively, the "Asserted Patents").<sup>3</sup> As a result of Rockwell's substantial domestic investment in research and development, the patented advances set a new paradigm in industrial control.

5. Rockwell brings this action to remedy violations of Section 337 arising from the unlawful and unauthorized importation into the United States, the sale for importation, and the sale within the United States after importation of certain industrial control system software, systems using same, and components thereof, that infringe the Asserted Patents, by or for Respondents.

6. Respondents have engaged in unlawful activities in violation of Section 337(a)(1)(B)(i) through and in connection with the unfair importation into the United States, the sale for importation, and/or the sale within the United States after importation of certain

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<sup>&</sup>lt;sup>3</sup> Certified copies of the Asserted Patents are appended hereto as Ex.s 2-9.

industrial control system software, systems using same, and components thereof, that infringe one or more of the following claims of the Asserted Patents (independent in bold):

	Claims Asserted Against Respondents
U.S. Patent No. 6,675,226	1, 9 and 10
U.S. Patent No. 6,816,817	<b>21</b> , 25, 26, <b>27</b> , 30, 31, 32, <b>33</b> , <b>34</b> and <b>35</b>
U.S. Patent No. 6,819,960	<b>1</b> , 2, 3, 4, 5, 7, 10, <b>23</b> , 24, 25, and 26
U.S. Patent No. 6,978,225	1, 3, 4, 5 and 6
U.S. Patent No. 7,130,704	<b>1</b> , 2, 3, 9, 13, <b>14</b> , 15, 16, 20 and 21
U.S. Patent No. 7,650,196	1, 2-6, 8, 9, 10, 12, 13, 15 and 16
U.S. Patent No. 7,693,585	1, 2, 4, 5, 7, 15, 17, 18, 19, 21 and <b>25</b>
U.S. Patent No. 8,799,800	1, 3-5, 7-10, 11, 12-14 and 15

7. The "Accused Products" include, but are not limited to: the CoDeSys Software Suite, including CoDeSys Development System V3.x, CoDeSys Control, CoDeSys Visualization and CoDeSys Gateway Server made and/or sold by Respondent 3S (collectively, the "CoDeSys v 3.x software") and at least the Advantech WA-CU Control Series of PC-based cabinet controllers, Advantech WA-CT Control Series of PC-based panel controllers and Advantech ADAM-5560CDS IPC, which incorporate and use the infringing 3S CoDeSys v 3.x software. Images of the representative Accused Products can be seen in Exs. 26, 27, and 59, attached hereto.

8. To remedy Respondents' continuing and unlawful violation of Section 337, Rockwell seeks as permanent relief a limited exclusion order pursuant to Section 337(d) barring from entry into the United States certain industrial control system software, systems using same,

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and components thereof that are sold for importation, imported, and/or sold in the United States after importation by or on behalf of Respondents. Rockwell also seeks a cease and desist order pursuant to Section 337(f) prohibiting Respondents, their subsidiaries, related companies and/or agents from selling for importation, importing, marketing or selling, advertising, offering for sale, offering sales or technical support related to, or using, certain industrial control system software, systems using same, and components thereof, that infringe or induce infringement of one or more claims of the Asserted Patents.

## II. COMPLAINANT

9. Complainant Rockwell Automation, Inc. is a publically-traded corporation organized and existing under the laws of Delaware with its principal place of business at 1201 South 2<sup>nd</sup> Street, Milwaukee, Wisconsin 53204. Rockwell Automation, Inc. is the owner of the Asserted Patents.

10. Rockwell Automation, Inc. is a leading global provider of industrial power, control and information solutions. The company continues the business founded as Allen-Bradley Co. in 1903. Rockwell is headquartered in Milwaukee, Wisconsin, and employs over 22,000 people worldwide, with approximately 8,500 employed in the United States. The company reported \$6.31 billion in sales during fiscal 2015, \$6.63 billion in sales in 2014, and \$6.35 billion in sales in 2013.

11. Rockwell has manufacturing facilities worldwide, including multiple facilities in the United States: Twinsburg, Ohio (257,000 square feet); Mequon, Wisconsin (240,000 square feet); Ladysmith, Wisconsin (124,000 square feet); and Richland Center, Wisconsin (124,000 square feet). In addition to manufacturing, Rockwell is focused on research and development of new, innovative, and reliable products. Rockwell's research and development spending for the

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fiscal years ending September 30, 2015, 2014, and 2013, was \$307.3 million, \$290.1 million, and \$260.7 million, respectively.

12. The core technology at issue in this investigation is the programmable control of a manufacturing process. Rockwell's Architecture & Software segment contains all of the elements of Rockwell's integrated control and information architecture capable of controlling a customer's manufacturing plant floor and connecting with their manufacturing enterprise.

13. Architecture & Software has a broad portfolio of products, including:

- Control platforms that perform multiple control disciplines and monitoring of applications, including discrete, batch, continuous process, drives control, motion control and machine safety control. These platform products include programmable logic controllers, human machine interface (HMI) devices, electronic input/output devices, communication and networking products, industrial computers and condition based monitoring systems.
- Software products that include configuration and visualization software used to
  operate and supervise control platforms, advanced process control software and
  manufacturing execution software (MES) that addresses information needs
  between the factory floor and a customer's enterprise business system. Examples
  of MES applications are production scheduling, asset management, tracking, and
  manufacturing business intelligence.
- Other Architecture & Software products, including rotary and linear motion control products, sensors and machine safety components.

14. In particular, the products at issue in this investigation are: software and firmware used to program and run Controllers, Network Adapters and Human Machine Interfaces. These

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are further explained below. What these products have in common is that they are all used to program, run and monitor industrial automation processes. These products are all part of Rockwell's integrated control platforms, including their associated firmware and software products. In particular, the products at issue are all part of Rockwell's ControlLogix Systems and associated visualization systems, firmware and software.

15. Rockwell's product offerings include patent-protected industrial control systems software and firmware, including its ControlLogix® industrial controllers and PanelView HMI products and firmware, and its RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, FactoryTalk® and RSView® software, collectively the Domestic Industry Products. (*See* Exs. 43-55.)

#### III. PROPOSED RESPONDENTS

16. On information and belief, Respondent 3S is a corporation organized and existing under the laws of Germany having its principal place of business at Memminger Str. 151, 87439 Kempten, Germany. As further detailed below, Respondent 3S designs, develops, integrates, manufactures, has manufactured, imports into the United States, sells for importation, and/or markets, sells and distributes within the United States after importation industrial control system software and components thereof, including its CoDeSys software, that infringe, directly or indirectly, one or more claims of the Asserted Patents. In addition, Respondent 3S uses, and knowingly directs and/or induces others, and specifically intends for those others, to use the Accused Products in a manner that infringes the Asserted Patents. Respondent 3S is not licensed to any Asserted Patents.

17. On information and belief, Respondent Advantech Corporation is a corporation organized and existing under the laws of California having its principal place of business at 380 Fairview Way, Milpitas, CA 95035. As further detailed below, Respondent Advantech

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Corporation imports into the United States, sells for importation, and/or sells and distributes within the United States after importation industrial control systems including industrial control system software, and components thereof, that infringe, directly or indirectly, one or more claims of the Asserted Patents. In addition, Respondent Advantech Corporation uses, and knowingly directs and/or induces others, and specifically intends for those others, to use the Accused Products in a manner that infringes the Asserted Patents. Respondent Advantech Corporation is not licensed to any Asserted Patents.

18. On information and belief, Respondent Advantech Co., Ltd. is a corporation organized and existing under the laws of Taiwan having its principal place of business at No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei City, Taiwan. As further detailed below, Respondent Advantech Co., Ltd. imports into the United States, sells for importation, and/or sells and distributes within the United States after importation industrial control systems including industrial control system software, and components thereof, that infringe, directly or indirectly, one or more claims of the Asserted Patents. In addition, Respondent Advantech Co., Ltd. uses, and knowingly directs and/or induces others, and specifically intends for those others, to use the Accused Products in a manner that infringes the Asserted Patents. Respondent Advantech Co., Ltd. is not licensed to any Asserted Patents.

#### IV. THE TECHNOLOGY AND PRODUCTS AT ISSUE

**19.** The technology at issue generally relates to industrial control systems that employ advanced software to program, run and visualize industrial control processes. In modern industrial environments, such as factories, energy generation and transmission facilities and transportation infrastructure and rolling stock, control is now nearly universally achieved through sophisticated computerized controllers executing custom-tailored software.

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20. Industrial controllers can be thought of as the "brain" of an industrial automation system. Their hardware may take the form of special-purpose computing devices such as Programmable Logic Controllers ("PLCs") (such as Rockwell's ControlLogix® PLCs). Industrial controllers are typically responsible for analyzing input data from sensors or other data sources, executing logic on the data and communicating the resulting control signals to control the operation of valves, motors, conveyors, etc. that are involved in the system. The logic executed by industrial controllers is nearly always custom-tailored to each application and can be very sophisticated and complex. Rockwell's RSLogix<sup>™</sup> and Studio 5000® software help engineers develop, test and implement controller software and logic to meet today's needs.

21. In addition to merely controlling industrial processes and systems, today's industrial controllers are often implemented in conjunction with products that allow human operators to visualize and oversee the operation of the controller and the system at large. One such product that has become popular in recent years is the Human Machine Interface ("HMI") that is typically a self-contained display and computer processor. HMIs also may include input functionality such as touch screen displays, mice, keyboards, etc. HMIs are typically physically separate from industrial controllers and communicate with them over a local computer network, often with the help of Rockwell's RSLinx® software. However, some HMI implementations reside on the same computing device as the controller or communicate with industrial controllers over the Internet. Rockwell's Studio 5000®, FactoryTalk® and RSView® and software help engineers develop, test and implement software for HMIs that facilitates communication with controllers and provides operators with all of the required information and control options.

22. As computing power and industry comfort with the technology have increased in recent years, more emphasis from the industry has been placed on improving the sophistication,

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reliability and commissioning speed of industrial control solutions. Rockwell recognized this trend very early and devoted substantial efforts to secure its lead in developing cutting edge solutions to meet these new challenges. The technologies patented by the Asserted Patents are prime examples of the types of innovative solutions that Rockwell invented and brought to market and which Rockwell is proud to count among the many symbols of its leading status in the industry.

23. Rockwell's product offerings include its Domestic Industry control systems software and firmware: ControlLogix® industrial controllers and PanelView HMI products and firmware, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, FactoryTalk® and RSView® software.

24. The infringing Accused Products utilize these novel technologies designed, developed and patented by Rockwell. The Accused Products include but are not limited to Respondent 3S's CoDeSys v 3.x software and Respondent Advantech's WA-CU Control Series, WA-CT Control Series and ADAM-5560CDS IPC series hardware running the CoDeSys v 3.x software. (See Exs. 26-27 and 59 showing that Advantech's imported WA-CU and WA-CT Control Series hardware is "preinstalled" with and runs CoDeSys v 3.x software and its and ADAM-5560CDS series hardware comes integrated with CoDeSys v 3.x.)

25. The Accused Products all include 3S's infringing CoDeSys software. Charts detailing the Accused Products' infringement of representative independent claims of the Asserted Patents are attached hereto as Exs. 18-25.

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# V. THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTION OF THE INVENTIONS

#### A. Identification and Ownership of the Asserted Patents<sup>4</sup>

#### 1. U.S. Patent Number 6,675,226

26. Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '226 patent, entitled Network Interface For Industrial Controller Providing Application Programmer Interface, which issued on January 6, 2004, naming Suresh Nair and Michael J. Gilson as inventors. The application that matured into the '226 patent, U.S. Patent Application No. 09/193,783 ("the '783 Application") was filed on November 17, 1998. All maintenance fees for the '226 patent have been paid. There are no fees currently due. A certified copy of the '226 patent is attached as Ex. 2, and certified copies of the recorded assignments from the named inventors are attached as Confidential Ex. 10.<sup>5</sup>

27. Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '226 patent are submitted herewith as Appendix A. Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '226 patent are submitted herewith as Appendix B.

<sup>&</sup>lt;sup>4</sup> A detailed, non-technical description of the Asserted Patents is provided in Section V.B below.

<sup>&</sup>lt;sup>5</sup> As can be seen in Confidential Ex. 10, the named inventors of the '226 Patent assigned their rights to Allen Bradley Company, LLC, which then assigned its rights to Rockwell Automation Technologies, Inc. on June 29, 2001. Rockwell Automation Technologies, Inc. then assigned its rights to its corporate parent, Rockwell Automation, Inc. on September 18, 2015.

#### 2. U.S. Patent Number 6,816,817

28. Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '817 patent, entitled Networked Control System With Real Time Monitoring, which issued on November 9, 2004, naming Kevin Retlich, Jinghui Luo, and Dave Blair as inventors. The application that matured into the '817 patent, U.S. Patent Application No. 09/672,937 ("the '937 Application") was filed on September 28, 2000. All maintenance fees for the '817 patent have been paid. There are no fees currently due. A certified copy of the '817 patent is attached as Ex. 3, and certified copies of the recorded assignments from the named inventors are attached as Confidential Ex. 11.<sup>6</sup>

**29.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '817 patent are submitted herewith as Appendix C. Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '817 patent are submitted herewith as Appendix D.<sup>7</sup>

#### 3. U.S. Patent Number 6,819,960

**30.** Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '960 patent, entitled Industrial Controller Automation Interface, which issued on

<sup>&</sup>lt;sup>6</sup> As can be seen in Confidential Ex. 11, the named inventors of the '817 Patent assigned their rights to Rockwell Technologies, LLC, which then assigned its rights to Rockwell Automation Technologies, Inc. on June 28, 2001. Rockwell Automation Technologies, Inc. then assigned its rights to its corporate parent, Rockwell Automation, Inc. on September 18, 2015.

<sup>&</sup>lt;sup>7</sup> A few references cited on the face of U.S. Patent No. 6,816,817 are not included in the attached Appendix D. None of the missing references were cited by the Examiner. Complainant is working diligently to locate the missing references and will provide a replacement copy of the cited references including all references that can be located after Complainant's search is complete.

November 16, 2004, naming Jeffrey A. McKelvey and Mike D'Amico as inventors. The application that matured into the '960 patent, U.S. Patent Application No. 09/928,623 ("the '623 Application") was filed on August 13, 2001. All maintenance fees for the '960 patent have been paid. There are no fees currently due. A certified copy of the '960 patent is attached as Ex. 4, and certified copies of the recorded assignments from the named inventors are attached as Confidential Ex. 12.<sup>8</sup>

**31.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '960 patent are submitted herewith as Appendix E.<sup>9</sup> Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '960 patent are submitted herewith as Appendix F.

#### 4. U.S. Patent Number 6,978,225

**32.** Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '225 patent, entitled Networked Control System With Real Time Monitoring, which issued on December 20, 2005, naming Kevin Retlich, Jinghui Luo, and Dave Blair as inventors. The

<sup>&</sup>lt;sup>8</sup> As can be seen in Confidential Ex. 12, the named inventors of the '960 Patent assigned their rights to Rockwell Software, Inc., which then merged into Rockwell Automation, Inc. on September 30, 2005. Rights in the '960 Patent then transferred to Rockwell Automation Technologies, Inc. by operation of law pursuant to an agreement between Allen-Bradley Company LLC (which merged into Rockwell Automation, Inc. pursuant to a March 28, 2002 Merger Agreement) and Rockwell Automation Technologies, Inc. dated June 29, 2001, whereby Allen-Bradley Company LLC assigned its patent rights to Rockwell Automation Technologies, Inc. Rockwell Automation Technologies, Inc. then assigned its rights back to its corporate parent, Rockwell Automation, Inc. on September 18, 2015.

<sup>&</sup>lt;sup>9</sup> A certified copy of the file history for U.S. Patent No. 6,819,960 has been ordered from the U.S. Patent and Trademark Office, but has not been received by counsel for Complainant at the time of filing. Complainant will provide replacement certified copies of this file history as soon as it is received.

application that matured into the '225 patent, U.S. Patent Application No. 10/913,675 ("the '675 Application") was filed on August 6, 2004. All maintenance fees for the '225 patent have been paid. There are no fees currently due. A certified copy of the '225 patent is attached as Ex. 5, and certified copies of the recorded assignments from the named inventors are attached as Confidential Ex. 13.<sup>10</sup>

**33.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '225 patent are submitted herewith as Appendix G. Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '225 patent are submitted herewith as Appendix H.

#### 5. U.S. Patent Number 7,130,704

**34.** Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '704 patent, entitled Industrial Controller Automation Interface, which issued on October 31, 2006, naming Jeffrey A. McKelvey and Mike D'Amico as inventors. The application that matured into the '704 patent, U.S. Patent Application No. 10/945,189 ("the '189 Application") was filed on September 20, 2004. All maintenance fees for the '704 patent have been paid. There are no fees currently due. A certified copy of the '704 patent is attached as Ex. 6, and

<sup>&</sup>lt;sup>10</sup> As can be seen in Confidential Ex. 13, the named inventors of the '225 Patent assigned their rights to Rockwell Technologies, LLC, which then assigned its rights to Rockwell Automation Technologies, Inc. on June 28, 2001. Rockwell Automation Technologies, Inc. then assigned its rights to its corporate parent, Rockwell Automation, Inc. on September 18, 2015.

certified copies of the recorded assignments from the named inventors are attached as Confidential Ex. 14.<sup>11</sup>

**35.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '704 patent are submitted herewith as Appendix I. Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '704 patent are submitted herewith as Appendix J.

#### 6. U.S. Patent Number 7,650,196

**36.** Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '196 patent, entitled Production Monitoring and Control System Having Organizational Structure-Based Presentation Layer, which issued on January 19, 2010, naming Kevin G. Gordon, Clifton H. Bromley, Eric G. Dorgelo, Douglas J. Reichard, Marc D. Semkow, and Shafin A. Virji as inventors. The application that matured into the '196 patent, U.S. Patent Application No. 11/239,925 ("the '925 Application") was filed on September 30, 2005. All maintenance fees for the '196 patent have been paid. There are no fees currently due. A

<sup>&</sup>lt;sup>11</sup> As can be seen in Confidential Ex. 14, the named inventors of the '704 Patent assigned their rights to Rockwell Software, Inc., which then merged into Rockwell Automation, Inc. on September 30, 2005. Rights in the '704 Patent then transferred to Rockwell Automation Technologies, Inc. by operation of law pursuant to an agreement between Allen-Bradley Company LLC (which merged into Rockwell Automation, Inc. pursuant to a March 28, 2002 Merger Agreement) and Rockwell Automation Technologies, Inc. dated June 29, 2001, whereby Allen-Bradley Company LLC assigned its patent rights to Rockwell Automation Technologies, Inc. Rockwell Automation Technologies, Inc. then assigned its rights back to its corporate parent, Rockwell Automation, Inc. on September 18, 2015.

certified copy of the '196 patent is attached as Ex. 7, and certified copies of the recorded assignments from the named inventors are attached as Ex. 15.<sup>12</sup>

**37.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '196 patent are submitted herewith as Appendix K.<sup>13</sup> Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '196 patent are submitted herewith as Appendix L.

#### 7. U.S. Patent Number 7,693,585

**38.** Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '585 patent, entitled Enabling Object Oriented Capabilities In Automation Systems, which issued on April 6, 2010, naming Michael D. Kalan, John J. Baier, David W. Farchmin, Randall A. Marquardt, Richard A. Morse, Stephen C. Briant, and Sujeet Chand as inventors. The application that matured into the '585 patent, U.S. Patent Application No. 10/955,654 ("the '654 Application") was filed on September 30, 2004. All maintenance fees for the '585 patent have been paid. There are no fees currently due. A certified copy of the '585 patent is attached as Ex.

<sup>&</sup>lt;sup>12</sup> As can be seen in Ex. 15, the named inventors of the '196 Patent assigned their rights to Rockwell Automation Technologies, Inc., which then assigned its rights to its corporate parent, Rockwell Automation, Inc. on July 21, 2016.

<sup>&</sup>lt;sup>13</sup> A certified copy of the file history for U.S. Patent No. 7,650,196 has been ordered from the U.S. Patent and Trademark Office, but has not been received by counsel for Complainant at the time of filing. Complainant will provide replacement certified copies of this file history as soon as it is received.

8, and certified copies of the recorded assignments from the named inventors are attached as Ex. 16.<sup>14</sup>

**39.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '585 patent are submitted herewith as Appendix M. Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '585 patent are submitted herewith as Appendix N.

#### 8. U.S. Patent Number 8,799,800

**40.** Rockwell Automation, Inc. owns by assignment the entire right, title and interest in the '800 patent, entitled Automatic User Interface Generation, which issued on August 5, 2014, naming Gavan W. Hood, Ralph Kappelhoff, and Kenwood H. Hall as inventors. The application that matured into the '800 patent, U.S. Patent Application No. 11/238,607 ("the '607 Application") was filed on September 29, 2005. All maintenance fees for the '800 patent have been paid. There are no fees currently due. A certified copy of the '800 patent is attached as Ex. 9, and certified copies of the recorded assignments from the named inventors are attached as Ex. 17.<sup>15</sup>

<sup>&</sup>lt;sup>14</sup> As can be seen in Ex. 16, the named inventors of the '585 Patent assigned their rights to Rockwell Automation Technologies, Inc., which then assigned its rights to its corporate parent, Rockwell Automation, Inc. on September 18, 2015.

<sup>&</sup>lt;sup>15</sup> As can be seen in Ex. 17, the named inventors of the '800 Patent assigned their rights to Rockwell Automation Technologies, Inc., which then assigned its rights to its corporate parent, Rockwell Automation, Inc. on July 21, 2016.

**41.** Pursuant to Commission Rule 210.12, a certified copy and three additional copies of the prosecution history of the '800 patent are submitted herewith as Appendix O.<sup>16</sup> Four copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '800 patent are submitted herewith as Appendix P.

#### **B.** Non-Technical Description of the Asserted Patents<sup>17</sup>

42. The '226 patent generally describes and claims novel interfaces for connecting a computer to devices on multiple industrial control networks so that data may be communicated across the different industrial control networks to and from an application program running on the computer. One exemplary use of such an interface is in connection with a PLC implemented as a computer that is connected to other devices on multiple industrial control networks.

**43.** The interface makes use of a configuration database to store information about the different industrial control network protocols. An operating system of the computer includes an application programmer's interface ("API") and the interface provides API extensions, both of which, in combination with the configuration database, assist application programs running on

<sup>&</sup>lt;sup>16</sup> A certified copy of the file history for U.S. Patent No. 8,799,800 has been ordered from the U.S. Patent and Trademark Office, but has not been received by counsel for Complainant at the time of filing. Complainant will provide replacement certified copies of this file history as soon as it is received.

<sup>&</sup>lt;sup>17</sup> The non-technical descriptions of the inventions claimed in the Asserted Patents set forth herein are not intended to construe either the specification or the claims, nor are they intended to characterize the inventive aspects of the claims or aspects which distinguish the claims from the prior art.

the computer to communicate with services of the computer as well as devices on the industrial control networks.

44. The interface also includes an asynchronous data area ("ADA") capable of storing data that is communicated over the different industrial control networks to further facilitate a simple and uniform interface between the computer and devices on the industrial control networks.

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**45.** The '817 and '225 patents generally describe and claim novel methods and systems for visualizing sensed parameters of networked electrical components such as motor controllers or programmable logic controllers. Data describing or identifying the monitored components is stored in a database and/or by the monitored components themselves. Operational parameters of the monitored components are sensed, processed and transmitted to a monitoring station, such as an HMI, which also receives the data describing or identifying the monitored components. The monitoring station may also be configured to cyclically poll the monitored components for data.

46. The monitoring station generates a user viewable display of the sensed parameters based upon the sensed parameters and also based on the data describing or identifying the monitored components. For example, the display may include a virtual meter which displays the current and historical levels of the sensed parameters.

47. The '960 and '704 patents generally describe and claim a system for allowing development software to interact with an industrial controller through the use of an automation interface. The automation interface allows users of the development software to, for example, upload control programs to the industrial controller, edit programs while they are in the industrial controller, or download programs from the industrial controller.

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**48.** A computer process interface library is associated with the automation interface to facilitate access to the industrial controller by application programs. The library is object-oriented in that it includes classes and objects for exposing processes of the automation interface.

**49.** The '196 patent generally describes and claims novel methods and software for human-machine interface generation systems comprising a reception component that can receive a request to generate a human-machine interface relating to industrial systems and processes and parameters associated with the initiator of the request.

**50.** A view generation component can generate the human-machine interface based at least in part upon the request and the parameters. For example, the system can further comprise a query generation component that creates a query based at least in part upon the request and the parameters and utilizes the query to extract data from a server within an industrial automation environment.

**51.** The '585 patent generally describes and claims methods for receiving data from an industrial control component such as a sensor or controller, encapsulating or packaging the data as properties and methods in an object-oriented data object and providing the data object to a data consuming device. By providing encapsulated data objects rather than just the raw data, data consuming devices are able to interact with the data with uniformity and predictability, allowing for easier and quicker implementation of control and visualization software that uses the data.

**52.** The '800 patent generally describes and claims novel methods, systems and software for facilitating the receipt of instantiated objects from within a programmable logic controller, wherein the objects conform to a hierarchically structured data model.

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**53.** A view generation component communicatively coupled to the reception component utilizes a subset of the objects to dynamically generate a user interface.

#### C. Foreign Counterparts to the Asserted Patents

54. Ex. 28 lists each foreign patent and each pending foreign patent application (not already issued as a patent), and each foreign patent application that has been denied, abandoned or withdrawn, containing a disclosure corresponding to the Asserted Patents, with an indication of the prosecution status of each such patent application. No other foreign patents or patent applications corresponding to the Asserted Patents have been filed, abandoned, withdrawn, or rejected.

#### **D.** Licenses to the Asserted Patents

**55.** Rockwell does not license any non-affiliated third parties to practice the patented inventions referenced herein.

#### VI. UNLAWFUL AND UNFAIR ACTS OF RESPONDENT

**56.** On information and belief, Respondent 3S imports into the United States, sells for importation, or sells within the United States after importation certain media containing software that infringes the Asserted Patents, either alone or in combination with other components, either literally or under the doctrine of equivalents.

57. On information and belief, the Advantech Respondents import into the United States, sell for importation, or sell within the United States after importation certain hardware containing software that infringes the Asserted Patents, either alone or in combination with other components, either literally or under the doctrine of equivalents.

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#### A. Infringement of All Asserted Claims of the '226 Patent

**58.** Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 9 and 10 of the '226 patent.

**59.** The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 9 and 10 of the '226 patent.

**60.** As shown by the representative claim chart and supporting documentation attached hereto as Ex. 18, the Accused Products that infringe independent claim 1 of the '226 patent include at least the CoDeSys software and Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.<sup>18</sup>

61. Respondent 3S had knowledge of the '226 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '226 patent, and its infringement of that patent, at least since September 18, 2105 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas

<sup>&</sup>lt;sup>18</sup> The Accused Products identified in this Complaint are merely illustrative of the infringing products that Respondents import into the United States, sell for importation into the United States and/or sell after importation into the United States in violation of Section 337. Discovery may reveal additional Accused Products.

captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:15-cv-1543) alleging that 3S's CoDeSys products infringed the '226 patent.

62. The Advantech Respondents had knowledge of the '226 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '226 patent, and its infringement of that patent, at least since June 2, 2016, when Rockwell's counsel sent a letter and subpoena to Respondent Advantech identifying it as a customer of Respondent 3S's infringing CoDeSys product. *See* Ex. 57.

63. Respondents also, on information and belief, perform all elements of the asserted claims of the '226 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 9 and 10 of the '226 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

64. On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '226 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or customers to setup and use industrial control systems and software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '226 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to connect computers and industrial control networks employing a variety of different protocols using communication APIs. *See* Exs. 29-32.

**65.** On information and belief, the CoDeSys software is especially adapted to provide a multi-network interface that infringes one or more claims of the '226 patent. Further, on

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information and belief, the CoDeSys software is especially adapted to establish an industrial control system including a multi-network interface that infringes at least claims 1, 9 and 10 of the '226 patent, and such systems have no substantial non-infringing use.

#### B. Infringement of All Asserted Claims of the '817 Patent

66. Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 21, 25, 26, 27, 30, 31, 32, 33, 34 and 35 of the '817 patent.

67. The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 21, 25, 26, 27, 30, 31, 32, 33, 34 and 35 of the '817 patent.

**68.** As shown by the representative claim charts and supporting documentation attached hereto as Ex. 19, the Accused Products that infringe independent claims 21, 27, 33, 34 and 35 of the '817 patent include at least the CoDeSys software and Respondent Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

69. Respondent 3S had knowledge of the '817 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '817 patent, and its infringement of that patent, at least since September 18, 2105 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas

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captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:15-cv-1543) alleging that 3S's CoDeSys products infringed the '817 patent.

**70.** The Advantech Respondents had knowledge of the '817 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '817 patent, and its infringement of that patent, at least since June 2, 2016, when Rockwell's counsel sent a letter and subpoena to Advantech identifying it as a customer of Respondent 3S's infringing CoDeSys product. *See* Ex. 57.

71. Respondents also, on information and belief, perform all elements of the asserted claims of the '817 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 21, 25, 26, 27, 30, 31, 32, 33, 34 and 35 of the '817 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

72. On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '817 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or customers to setup and use industrial control systems and software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '817 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to link multiple devises across a network and monitor operational parameters of the networked devices. *See* Exs. 29-32.

73. On information and belief, the CoDeSys software is especially adapted to perform a method for monitoring operational parameters of networked electrical components in a manner

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that infringes at least claims 21, 25, 26, 27, 30, 31, 32, 33, 34 and 35 of the '817 patent. Further, on information and belief, the CoDeSys software is especially adapted to establish an industrial control system which performs a method for monitoring operational parameters of networked electrical components in a manner that infringes at least claims 21, 25, 26, 27, 30, 31, 32, 33, 34 and 35 of the '817 patent, and such systems have no substantial non-infringing use.

#### C. Infringement of All Asserted Claims of the '960 Patent

74. Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 3, 4, 5, 7, 10, 23, 24, 25 and 26 of the '960 patent.

**75.** The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 3, 4, 5, 7, 10, 23, 24, 25 and 26 of the '960 patent.

76. As shown by the representative claim charts and supporting documentation attached hereto as Ex. 20, the Accused Products that infringe independent claims 1, 2, 3, 4, 5, 7, 10, 23, 24, 25 and 26 of the '960' patent include at least the CoDeSys software and Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

77. Respondent 3S had knowledge of the '960 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '960

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patent, and its infringement of that patent, at least since August 4, 2016 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:16-cv-00869) alleging that 3S's CoDeSys products infringed the '960 patent.

78. The Advantech Respondents had knowledge of the '960 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '960 patent, and its infringement of that patent, at least since August 4, 2016, when Rockwell's counsel sent a letter to Advantech's counsel forwarding them a copy of a complaint filed against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:16-cv-00869) alleging that 3S's CoDeSys products infringed the '960 patent. *See* Ex. 58.

**79.** Respondents also, on information and belief, perform all elements of the asserted claims of the '960 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 2, 3, 4, 5, 7, 10, 23, 24, 25 and 26 of the '960 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

**80.** On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '960 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or customers to setup and use industrial control system software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '960 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For

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example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to create, upload and download code to an industrial controller, and to edit control programs while in the industrial controller in an "Online" mode. *See* Exs. 29-32.

**81.** On information and belief, the CoDeSys software is especially adapted to provide a system and perform a method for facilitating interaction with an industrial controller that infringes at least claims 1, 2, 3, 4, 5, 7, 10, 23, 24, 25 and 26 of the '960 patent. Further, on information and belief, the CoDeSys software is especially adapted to establish an industrial control system including a system for facilitating interaction with an industrial controller and which performs a method for facilitating interaction with an industrial controller that infringes at least claims 1, 2, 3, 4, 5, 7, 10, 23, 24, 25 and 26 of the '960 patent, and such systems have no substantial non-infringing use.

#### D. Infringement of All Asserted Claims of the '225 Patent

**82.** Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 3, 4, 5 and 6 of the '225 patent.

**83.** The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 3, 4, 5 and 6 of the '225 patent.

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**84.** As shown by the representative claim chart and supporting documentation attached hereto as Ex. 21, the Accused Products that infringe independent claim 1 of the '225 patent include at least the CoDeSys software and Respondent Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

**85.** Respondent 3S had knowledge of the '225 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '225 patent, and its infringement of that patent, at least since September 18, 2105 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:15-cv-1543) alleging that 3S's CoDeSys products infringed the '226 patent.

**86.** The Advantech Respondents had knowledge of the '225 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '225 patent, and its infringement of that patent, at least since June 2, 2016, when Rockwell's counsel sent a letter and subpoena to Advantech identifying it as a customer of Respondent 3S's infringing CoDeSys product. *See* Ex. 57

87. Respondents also, on information and belief, perform all elements of the asserted claims of the '225 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 3, 4, 5 and 6 of the '225 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

88. On information and belief, Respondents also direct others, and specifically intends for those others to use the Accused Products in a manner that infringes the '225 patent.
For example, on information and belief, Respondents direct their employees, agents, users and/or

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customers to setup and use industrial control system software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '225 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to link multiple devices across a network and monitor operational parameters of the networked devices. *See* Exs. 29-32.

**89.** On information and belief, the CoDeSys software is especially adapted to provide a system for monitoring a plurality of electrical components that infringes at least claims 1, 3, 4, 5 and 6 of the '225 patent. Further, on information and belief, the CoDeSys software is especially adapted to establish an industrial control system including a system for monitoring a plurality of electrical components that infringes at least claims 1, 3, 4, 5 and 6 of the '225 patent, and such systems have no substantial non-infringing use.

#### E. Infringement of All Asserted Claims of the '704 Patent

**90.** Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 3, 9, 13, 14, 15, 16, 20 and 21 of the '704 patent.

**91.** The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 3, 9, 13, 14, 15, 16, 20 and 21 of the '704 patent.

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**92.** As shown by the representative claim charts and supporting documentation attached hereto as Ex. 22, the Accused Products that infringe independent claims 1, 13, and 14 of the '704 patent include at least the CoDeSys software and Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

**93.** Respondent 3S had knowledge of the '704 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '704 patent, and its infringement of that patent, at least since September 18, 2105 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:15-cv-1543) alleging that 3S's CoDeSys products infringed the '704 patent.

**94.** The Advantech Respondents had knowledge of the '704 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '704 patent, and its infringement of that patent, at least since June 2, 2016, when Rockwell's counsel sent a letter and subpoena to Advantech identifying it as a customer of Respondent 3S's infringing CoDeSys product. *See* Ex. 57

**95.** Respondents also, on information and belief, perform all elements of the asserted claims of the '704 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 2, 3, 9, 13, 14, 15, 16, 20 and 21 of the '704 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

**96.** On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '704 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or

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customers to setup and use industrial control system software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '704 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to create, upload and download code to an industrial controller, and to edit control programs while in the industrial controller in and "Online" mode. *See* Exs. 29-32.

**97.** On information and belief, the CoDeSys software is especially adapted to provide a system and perform a method for facilitating interaction with an industrial controller that infringes at least claims 1, 2, 3, 9, 13, 14, 15, 16, 20 and 21 of the '704 patent. Further, on information and belief, the CoDeSys software is especially adapted to establish an industrial control system including a system for facilitating interaction with an industrial controller and which performs a method for facilitating interaction with an industrial controller that infringes at least claims 1, 2, 3, 9, 13, 14, 15, 16, 20 and 21 of the '704 patent, and such systems have no substantial non-infringing use.

#### F. Infringement of All Asserted Claims of the '196 Patent

**98.** Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2-6, 8, 9, 10, 12, 13, 15 and 16 of the '196 patent.

**99.** The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that

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directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2-6, 8, 9, 10, 12, 13, 15 and 16 of the '196 patent.

**100.** As shown by the representative claim charts and supporting documentation attached hereto as Ex. 23, the Accused Products that infringe independent claims 1, 9, and 15 of the '196 patent include at least the CoDeSys software and Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

**101.** Respondent 3S had knowledge of the '196 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '196 patent, and its infringement of that patent, at least since August 4, 2016 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:16-cv-00869) alleging that 3S's CoDeSys products infringed the '196 patent.

**102.** The Advantech Respondents had knowledge of the '196 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '196 patent, and its infringement of that patent, at least since August 4, 2016, when Rockwell's counsel sent a letter to Advantech's counsel forwarding them a complaint against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:16-cv-00869) alleging that 3S's CoDeSys products infringed the '196. *See* Ex. 58.

**103.** Respondents also, on information and belief, perform all elements of the asserted claims of the '196 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 2-6, 8, 9,

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10, 12, 13, 15 and 16 of the '196 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

**104.** On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '196 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or customers to setup and use industrial control system software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '196 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to generate human machine interfaces as described and claimed in the '196 patent. *See* Exs. 29-32.

105. On information and belief, the CoDeSys software is especially adapted to provide a system and perform a method for generating human machine interfaces that infringes at least claims 1, 2-6, 8, 9, 10, 12, 13, 15 and 16 of the '196 patent. Further, on information and belief, the CoDeSys software is especially adapted to generate human machine interfaces that infringes at least claims 1, 2-6, 8, 9, 10, 12, 13, 15 and 16 of the '196 patent, and such systems have no substantial non-infringing use.

#### G. Infringement of All Asserted Claims of the '585 Patent

**106.** Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 4, 5, 7, 15, 17, 18, 19, 21 and 25 of the '585 patent.

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**107.** The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 4, 5, 7, 15, 17, 18, 19, 21 and 25 of the '585 patent.

**108.** As shown by the representative claim charts and supporting documentation attached hereto as Ex. 24, the Accused Products that infringe independent claims 1, 17, and 25 of the '585 patent include at least the CoDeSys software and Advantech's WA-CU and WA-CT Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

**109.** Respondent 3S had knowledge of the '585 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '585 patent, and its infringement of that patent, at least since September 18, 2105 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:15-cv-1543) alleging that 3S's CoDeSys products infringed the '585 patent.

110. The Advantech Respondents had knowledge of the '585 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '585 patent, and its infringement of that patent, at least since June 2, 2016, when Rockwell's counsel sent a letter and subpoena to Advantech identifying it as a customer of Respondent 3S's infringing CoDeSys product. *See* Ex. 57.

111. Respondents also, on information and belief, perform all elements of the asserted claims of the '585 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 2, 4, 5, 7,

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15, 17, 18, 19, 21 and 25 of the '585 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

112. On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '585 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or customers to setup and use industrial control systems and software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '585 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to use the software's I/O mapping (packaging) component, which receives data and encapsulates it as a variable, to encapsulate multiple data sources into structure elements of a structured variable. *See* Exs. 29-32.

113. On information and belief, the CoDeSys software is especially adapted to provide a system and perform a method for providing data within an industrial control system that infringes at least claims 1, 2, 4, 5, 7, 15, 17, 18, 19, 21 and 25 of the '585 patent. Further, on information and belief, the CoDeSys software is especially adapted to establish an industrial control system including a system for providing data within an industrial control system and which performs a method for providing data within an industrial control system that infringes at least claims 1, 2, 4, 5, 7, 15, 17, 18, 19, 21 and 25 of the '585 patent, and such systems have no substantial non-infringing use.

#### H. Infringement of All Asserted Claims of the '800 Patent

**114.** Respondent 3S manufactures, has manufactured, or directs another party to manufacture, and import, sell for importation, and/or sell within the United States after

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importation, industrial control system software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 3-5, 7-10, 11, 12-14 and 15 of the '800 patent.

115. The Advantech Respondents manufacture, have manufactured, or direct another party to manufacture, and import, sell for importation, and/or sell within the United States after importation, industrial control system software hardware with software, and components thereof, that directly infringe, either literally or under the doctrine of equivalents, at least claims 1, 3-5, 7-10, 11, 12-14 and 15 of the '800 patent.

116. As shown by the representative claim charts and supporting documentation attached hereto as Ex. 25, the Accused Products that infringe independent claims 1, 11, and 15 of the '800 patent include at least the CoDeSys software and Advantech's WA-CU and WA-CT' Control Series and ADAM-5560CDS IPC hardware running the CoDeSys software.

117. Respondent 3S had knowledge of the '800 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, 3S has had knowledge of the '800 patent, and its infringement of that patent, at least since August 4, 2016 when Rockwell filed a suit against Respondent 3S in the United States District Court for the Eastern District of Texas captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:16-cv-00869) alleging that 3S's CoDeSys products infringed the '800 patent.

**118.** The Advantech Respondents had knowledge of the '800 patent, and its infringement of that patent, prior to the filing of this Complaint. Specifically, Advantech has had knowledge of the '800 patent, and its infringement of that patent, at least since August 4, 2016, when Rockwell's counsel sent a letter to Advantech's counsel forwarding a complaint against Respondent 3S in the United States District Court for the Eastern District of Texas captioned

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*Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH* (Civil Action No.: 2:16-cv-00869) alleging that 3S's CoDeSys products infringed the '800 patent. *See* Ex. 58.

**119.** Respondents also, on information and belief, perform all elements of the asserted claims of the '800 patent, and/or knowingly induce and/or contribute to the infringement of those claims by others. On information and belief, Respondents directly infringe claims 1, 3-5, 7-10, 11, 12-14 and 15 of the '800 patent by directing their employees or agents to operate, test, repair, service, use and/or demonstrate the Accused Products in the United States.

**120.** On information and belief, Respondents also direct others, and specifically intend for those others to use the Accused Products in a manner that infringes the '800 patent. For example, on information and belief, Respondents direct their employees, agents, users and/or customers to setup and use industrial control systems and software in an infringing manner, specifically intending those parties to infringe the asserted claims of the '800 patent, for example, by providing training guides and instruction, user manuals, and similar materials. For example, Respondent 3S provides user manuals that instruct users of its CoDeSys software to generate user interfaces using instantiated objects. *See* Exs. 29-32.

121. On information and belief, the CoDeSys software is especially adapted to provide a system and perform a method for generating a user interface using instantiated objects that infringes at least claims 1, 3-5, 7-10, 11, 12-14 and 15 of the '800 patent. Further, on information and belief, the CoDeSys software is especially adapted to generate user interfaces using instantiated objects that infringes at least claims 1, 3-5, 7-10, 11, 12-14 and 15 of the '800 patent, and such systems have no substantial non-infringing use.

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# VII. RESPONDENT'S SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE

**122.** The Accused Products are imported into the United States, sold for importation into the United States, and/or sold within the United States after importation by or on behalf of Respondents and/or through various other channels, agents, and distributors.

123. The Advantech Respondents do not have manufacturing facilities in the U.S.; its products are manufactured in Asia. *See* Ex. 34, (first page after cover page showing that Advantech's manufacturing facilities are located outside the U.S.). Advantech's accused WA-CU and WA-CT Controllers and ADAM-5560CDS IPC, which are manufactured in Asia, are imported into the United States preinstalled with CoDeSys v3.5, which is designed by Respondent 3S in Germany. *See* Ex. 33 (showing that 3S designs its CoDeSys software in Germany); *see* Exs. 26, 27, p. 1 (stating in blue box on first page that the controller is "Preinstalled [with] CODESYS Control Runtime & Vixualiztion"); Ex. 59, p. 1(stating in Introduction that the ADAM-5560-CDS comes with a "CODESYS Integrated stable run time" and "integrated target visualization HMI software). Advantech has shipped its accused hardware loaded with the CoDeSys software into the United States and, upon information and belief, Adventech imports, sells for importation and/or sells after importation into the United States its hardware loaded with the CoDeSys software. *See* Exs. 26, 27, 34, and 59.

124. Respondent 3S designs and tests its infringing software in Kempten, Germany. 3S employs at least a hundred and thirty workers at its Kempten, Germany headquarters. *See* Ex.33. Respondent 3S has sold its accused CoDeSys software for importation into the United States (Exs. 26, 27, 34, and 59), 3S has imported its accused CoDeSys software into the United States and, upon information and belief, 3S imports its accused CoDeSys software, as well as hardware running its infringing software, into the U.S.

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## VIII. CLASSIFICATION OF THE INFRINGING PRODUCTS UNDER THE HARMONIZED TARIFF SCHEDULE

**125.** Upon information and belief, the infringing Accused Products may be classified under at least the following heading and subheading of the Harmonized Tariff Schedule of the United States ("HTSUS"): 8542.31.00, 8543.70.95, 9032.89.60.

**126.** These classifications are exemplary in nature and are not intended to restrict the scope of any limited exclusion order or other remedy ordered by the Commission.

## IX. RELATED LITIGATION

127. On September 18, 2015, Rockwell filed suit against Respondent 3S in the United States District Court for the Eastern District of Texas alleging infringement of five of the Asserted Patents (the '226 patent, the '817 patent, the '225 patent, the '704 patent, and the '585 patent) captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH.* 

**128.** Respondent 3S has answered Rockwell's Complaint and has denied that the five asserted patents are valid and infringed. Discovery in that case is ongoing. The parties have exchanged proposed claim constructions and submitted a Joint Claim Construction Statement to the Court showing their respective proposed constructions. The parties are currently briefing claim construction issues.

129. On August 4, 2015, Rockwell filed suit against Respondent 3S in the United States District Court for the Eastern District of Texas alleging infringement of three of the Asserted Patents (the '960 patent, the '196 patent, the '800 patent) captioned *Rockwell Automation, Inc. v. 3S-Smart Software Solutions, GMBH.* Respondent 3S has not yet responded to Rockwell's Complaint.

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**130.** The validity of the Asserted Patents has not been challenged in the USPTO through any post-issuance review procedures, including post-grant review, inter partes review, ex parte reexamination, inter partes reexamination or reissuance.

131. The unfair acts asserted here, or the subject matter thereof, have not been the subject of any other previous litigation in any domestic or foreign court or administrative agency.

## X. THE DOMESTIC INDUSTRY RELATING TO THE ASSERTED PATENTS

**132.** An industry as required by Section 337(a)(2) and defined by Section 337(a)(3) exists in the United States relating to Rockwell's Domestic Industry Products. The Domestic Industry Products practice at least one claim of the Asserted Patents. Rockwell has made significant investments in plant and equipment, significant investments in the employment of labor and capital, and substantial investments in engineering, research and development to develop and support the Domestic Industry Products through design, development, manufacture, assembly, programming, service, repair, testing, training, packaging, distribution and other activities relating to the Domestic Industry Products and the exploitation of the Asserted Patents.

#### A. Technical Prong

133. Rockwell's Domestic Industry Products, including, but not limited to, ControlLogix® controllers and PanelView HMIs and related firmware and software, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, RSView® and FactoryTalk® software, alone and/or together, practice at least one claim of each Asserted Patent. Images of representative Domestic Industry Products are included in Exs. 43-55.

Rockwell's Domestic Industry Products practice the '226 patent. Specifically,
 Rockwell's ControlLogix® controllers and related firmware and software, and RSLogix™,

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Studio 5000®, and RSLinx® software, alone and/or together, practice at least claims 1, 5, 9-13, 15, 18 and 19 of the '226 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 35 includes a chart comparing an exemplary claim of the '226 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 43, 44, 46-51 and 54.<sup>19</sup>

135. Rockwell's Domestic Industry Products practice the '817 patent. Specifically, Rockwell's ControlLogix® controllers and PanelView HMIs and related firmware and software, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, RSView® and FactoryTalk® software, alone and/or together, practice at least claims 21-27 and 29-36 of the '817 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 36 includes a chart comparing an exemplary claim of the '817 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 43-55.

136. Rockwell's Domestic Industry Products practice the '960 patent. Specifically, Rockwell's ControlLogix® controllers and related firmware and software, and RSLogix<sup>™</sup> and Studio 5000® software, alone and/or together, practice at least claims 1-5, 7, 10 and 23-26 of the '960 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 37 includes a chart comparing an exemplary claim of the '960 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 44, 47-51 and 54.

137. Rockwell's Domestic Industry Products practice the '225 patent. Specifically, Rockwell's ControlLogix® controllers and PanelView HMIs and related firmware and software, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, RSView® and FactoryTalk® software, alone and/or

<sup>&</sup>lt;sup>19</sup> Rockwell's DI Products practice other claims of the Asserted Patents in addition to the exemplary claims identified in this Complaint, and Rockwell may establish the technical prong of the domestic industry requirement through claims and products other than the exemplary claims and products cited in these Ex.s.

together, practice at least claims 1 and 3-6 of the '225 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 38 includes a chart comparing an exemplary claim of the '225 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 43-55.

138. Rockwell's Domestic Industry Products practice the '704 patent. Specifically, Rockwell's ControlLogix® controllers and related firmware and software, and RSLogix<sup>™</sup> and Studio 5000® software, alone and/or together, practice at least claims 1-3, 5, 6, 9, 10, 13-16, 20 and 21 of the '704 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 39 includes a chart comparing an exemplary claim of the '704 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 44, 47-51 and 54.

139. Rockwell's Domestic Industry Products practice the '196 patent. Specifically, Rockwell's ControlLogix® controllers and PanelView HMIs and related firmware and software, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, RSView® and FactoryTalk® software, alone and/or together, practice at least claims 1-6, 8-10, 12, 13, 15 and 16 of the '196 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 40 includes a chart comparing an exemplary claim of the '196 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 43-55.

140. Rockwell's Domestic Industry Products practice the '585 patent. Specifically, Rockwell's ControlLogix® controllers and PanelView HMIs and related firmware and software, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, RSView® and FactoryTalk® software, alone and/or together, practice at least claims 1-5, 7, 9-11 and 15-25 of the '585 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 41 includes a chart comparing an exemplary claim of the '585 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 43-55.

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141. Rockwell's Domestic Industry Products practice the '800 patent. Specifically, Rockwell's ControlLogix® controllers and PanelView HMIs and related firmware and software, and RSLogix<sup>™</sup>, Studio 5000®, RSLinx®, RSView® and FactoryTalk® software, alone and/or together, practice at least claims 1 and 3-15 of the '800 patent. Pursuant to Commission Rule 210.12(a)(9)(ix), Ex. 42 includes a chart comparing an exemplary claim of the '800 patent to representative Domestic Industry Products, which are described in greater detail in Exs. 43-55.

#### **B.** Economic Prong

142. A domestic industry exists in the United States by virtue of Rockwell's significant and substantial investments in plant, equipment, labor and capital in the United States involved in activities related to the domestic manufacturing, engineering, development, testing, installation, marketing, distribution, customer service, repair, and warranty fulfillment of its Domestic Industry Products.

143. Rockwell is the world's largest company dedicated to industrial automation and maintains extensive U.S. research and manufacturing facilities in Milwaukee, Wisconsin and Twinsburg and Mayfield Heights, Ohio. *See* Ex. 1 and Confidential Ex. 56. As discussed in Confidential Ex. 56, Rockwell has made a significant investment in domestic facilities and equipment specifically used for the design, development, manufacturing, testing, installation, repair, and servicing of Domestic Industry Products. *Id.* 

144. In addition, as described Confidential Ex. 56, numerous employees have been and continue to be involved in the design, development, manufacturing, testing, packaging, distribution, installation, repair, and servicing of Rockwell's Domestic Industry Products. *Id.*Rockwell has made significant investments in salaries, benefits, and other labor costs for these employees. *Id.*

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145. Rockwell has also made substantial investments in the exploitation of the Asserted Patents through domestic engineering, research and development activities to develop and support the Domestic Industry Products through design, manufacture, assembly, programming, service, repair, testing, training, packaging, distribution, and other activities. *Id.* 

#### XI. RELIEF REQUESTED

146. Rockwell respectfully requests that the Commission:

a. Institute an immediate investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to Respondents' violations of that section arising from the importation into the United States, sale for importation, and/or the sale within the United States after importation of certain industrial control system software, systems incorporating same, and components thereof, that infringe one or more claims of United States Patent Nos. 6,675,226, 6,816,817, 6,819,960, 6,978,225, 7,130,704, 7,650,196, 7,693,585 and 8,799,800;

b. Schedule and conduct a hearing pursuant to Section 337(c) for the purposes of (i) receiving evidence and hearing argument concerning whether there has been a violation of Section 337, and (ii) following the hearing, determining that there has been a violation of Section 337;

c. Issue a permanent limited exclusion order directed to products manufactured by or for Respondents, their subsidiaries, affiliates, related companies, agents, and distributors pursuant to 19 U.S.C. § 1337(d) excluding entry into the United States of any control system software, systems incorporating same, and components thereof, made by or for Respondents that infringe one or more claims of United States Patent Nos. 6,675,226; 6,816,817; 6,819,960; 6,978,225; 7,130,704; 7,650,196; 7,693,585; and 8,799,800;

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d. Issue a permanent cease and desist order pursuant to 19 U.S.C. § 1337(f) prohibiting Respondents, their subsidiaries, affiliates, related companies, agents and distributors from selling for importation, importing, marketing or selling, offering for sale, advertising, offering sales or providing technical support related to, or using, any control system software, systems incorporating same, and components thereof, made by or for Respondents that infringe one or more claims of United States Patent Nos. 6,675,226; 6,816,817; 6,819,960; 6,978,225; 7,130,704; 7,650,196; 7,693,585; and 8,799,800;

e. Impose a bond upon importation of infringing industrial control systems and software, and components thereof, during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j); and

f. Issue such other and further relief as the Commission deems just and proper under the law, based on the facts determined by the Investigation and the authority of the Commission.

DATED: August 5, 2016

Respectfully submitted, By:

Paul J. Tanck Gregory J. Carbo CHADBOURNE & PARKE LLP 1301 Avenue of the Americas New York, NY 10019 Tel: (212) 408-5100 Fax: (212) 541-5369

David F. Nickel James B. Altman Matthew N. Duescher FOSTER, MURPHY, ALTMAN & NICKEL, PC 1899 L Street, NW, Suite 1150 Washington, DC 20036 Tel: (202) 822-4100 Fax: (202) 822-4199

Attorneys for Complainant Rockwell Automation, Inc.