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10 **UNITED STATES DISTRICT COURT**
11 **CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION**
12

13 SPADA INNOVATIONS, INC.,

14 Plaintiff,

15 v.

16 AT&T COMMUNICATIONS, LLC,
17 AT&T SERVICES, INC., AT&T
MOBILITY LLC and PACIFIC BELL
18 TELEPHONE COMPANY,

19 Defendants.

Case No. 2:24-cv-06703-MWF-MAR

**SPADA INNOVATIONS, INC.'s
OPPOSITION TO DEFENDANTS'
MOTION TO DISMISS AMENDED
COMPLAINT**

*Filed concurrently with Declaration of
J. Raza Lawrence; Request for Judicial
Notice*

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1 **I. INTRODUCTION**

2 Plaintiff SPADA Innovations, Inc. (“SPADA”) submits this memorandum in
3 opposition to Defendants’ Notice of Motion and Motion to Dismiss Plaintiff’s
4 Amended Complaint (Dkt. 29) (“the Motion”) by defendants AT&T
5 Communications, LLC, AT&T Services, Inc, AT&T Mobility LLC and Pacific Bell
6 Telephone Company (collectively “AT&T”). AT&T’s Motion should be denied
7 because SPADA’s Amended Complaint (“AC”) provides detailed, plausible
8 allegations that demonstrate AT&T’s direct infringement of SPADA’s patented
9 technological innovations in network signal distribution and security.

10 This is an action for infringement of two SPADA patents by AT&T. SPADA’s
11 inventions, while simple to describe, provide a profound technological advancement
12 of internet service information security that has been adopted by the Internet Service
13 Provider (“ISP”) industry, including by AT&T. As set forth in Paragraph 1 of the AC,
14 SPADA’s claimed methods use

15 a Passive Optical Network (PON) to distribute virtually separated
16 signals that are part of a combined data stream received by the PON and
17 delivered to end users such that only the intended recipient can access
18 the information in that combined data stream intended for that user.

19 SPADA’s methods combine the use of two things that were known in the industry at
20 the time of the invention. First, a PON for distributing signals to multiple end users.
21 Second, a more efficient, fast and reliable method of virtual separation of signals than
22 what previously existed.

23 What was **not known** was the capacity to convey virtually separated signals
24 through a PON, which would then distribute those signals to end users accurately and
25 securely. When SPADA first proposed its method, industry experts were skeptical of
26 its feasibility. Through rigorous development and proof of concept, SPADA validated
27 its innovated approach and secured patent protection for a groundbreaking network
28 signal distribution methodology.

1 Because of the security, efficiency and speed provided by the use of SPADA's
2 method, SPADA's claimed method is now used universally in the ISP industry,
3 including by AT&T – whose unauthorized use of SPADA's patented technology is
4 substantial and systematic. SPADA has attempted to license its patents to AT&T for
5 a reasonable royalty. SPADA told AT&T about its patents, and why AT&T infringed
6 them, on May 30, 2024. After months of reviewing that information, AT&T declined
7 to take a license and continued to infringe, without providing any reason why it was
8 not infringing SPADA's patents. SPADA then filed this action.

9 AT&T's Motion lacks merit. The AC clearly sets forth the bases of
10 infringement, relying on how all PONs operate (*e.g.*, ¶19) and how signals received
11 by AT&T's PONs are virtually separated, which is done in accordance with industry
12 standards. As publicly available information proves, AT&T has adopted those
13 standards because AT&T understands their combination is essential to provide
14 security of communications (*e.g.*, ¶17).

15 AT&T mischaracterizes both SPADA's allegations and the applicable pleading
16 standards. The AC provides detailed factual allegations tying the method AT&T uses
17 to provide PON-based fiber services to each element of SPADA's asserted claims.
18 SPADA's infringement contentions are based on AT&T's implementation of a
19 commercially essential combination of standard elements – a combination that, while
20 not required by any single standard, is fundamental to delivery of AT&T's high-speed
21 fiber services.

22 AT&T's arguments about the adequacy of SPADA's AC fail. First, AT&T
23 argues that SPADA “does not identify any device or sources of those ‘data streams’”
24 (Motion. 9). AT&T's argument is misplaced. All that is required by the claims is that
25 a PON ***receive and successfully deliver to its end users*** one or more data streams that
26 have been virtually separated using Virtual Routing and Forwarding (VRF). The
27 means used to generate such virtually separated data streams via VRF are not claimed.
28 And the public record demonstrates that AT&T PONs receive such VRF generated

1 virtually separated data streams to meet what AT&T acknowledges are critical
2 security requirements.

3 Second, AT&T argues that SPADA relies on “third-party technical documents”
4 to support its claims” (Motion. 9). Again, AT&T’s argument misleads. AT&T touts
5 its adoption of those same standards as essential to provide security of
6 communications. Indeed, AT&T’s own documentation admits its adoption of PON
7 technology and its reliance on RFC 4364 and Layer 3 IP VPNs for secure and scalable
8 network management. These admissions contradict AT&T’s unsupported conjecture
9 that it may not be using VRF in its network. It is.

10 Thus, AT&T’s arguments are unfounded and rest on AT&T’s feigned
11 ignorance. AT&T’s Motion should therefore be denied.

12 **II. SPADA’S ALLEGATIONS SATISFY THE PLEADING STANDARDS**

13 **A. SPADA’s Allegations are Plausible, Sufficiently Specific, and**
14 **Consistent with the Pleading Requirements**

15 The Federal Circuit consistently holds that a complaint need not provide a
16 detailed element-by-element claim chart at the pleading stage. *See, e.g., Nalco Co. v.*
17 *Chem-Mod, LLC*, 883 F.3d 1337, 1350 (Fed. Cir. 2018) (a plaintiff need not “prove
18 its case at the pleading stage” but instead must merely “place the potential infringer
19 on notice of what activity is being accused of infringement”). The AC provides far
20 more detail than is required. By identifying specific accused services, the functional
21 roles of individual components, and the operational details of AT&T’s network,
22 SPADA’s allegations both (a) provide AT&T with clear notice of the accused
23 instrumentalities and the basis for SPADA’s claims, and (b) demonstrate the
24 plausibility of infringement through detailed factual allegations that correspond to
25 specific claim limitations.

26 As set forth below, the sufficiency of SPADA’s pleading is supported by the
27 combination of detailed factual allegations in the AC and publicly available
28 information subject to judicial notice about AT&T’s network, including its reliance

1 on RFC 4364 and Layer 3 IP VPNs. This factual foundation allows the Court to
2 reasonably infer that AT&T's network practices the asserted claims. Accordingly,
3 there is no basis for granting AT&T's Motion.

4 **B. The Amended Complaint Provides Detailed Allegations Regarding**
5 **the Accused Instrumentalities**

6 1. **The Amended Complaint maps AT&T's network**
7 **components and operations to each of the patent**
8 **infringement claims**

9 The AC details how AT&T's network practices all elements of the asserted
10 claims, satisfying the standards in *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) and
11 *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007). SPADA's patents claim
12 an inventive combination of PON technologies with VRF, achieving superior security
13 and scalability, rather than merely describing standard operations. The AC explains
14 how AT&T's specific implementation exceeds the basic requirements of PON
15 standards and aligns with SPADA's patented methods (§§ 16–28).

16 Regarding Claim 4 of the '898 Patent, the AC provides a detailed explanation
17 of how AT&T's network practices each element. First, the AC describes how AT&T's
18 PONs perform the step of receiving private data streams, which are labeled with tags
19 for further identification (§§ 16-18). Second, it explains how AT&T uses VRF to
20 achieve the virtual separation of these private data streams, aligning with the RFC
21 4364 standard and AT&T's implementation of VPNs (§ 17). Finally, the AC details
22 how AT&T PONs aggregate and distribute the data streams to end users using the
23 patented process (§§ 16, 18-22).

24 The AC also maps AT&T's network components and operations to Claims 5
25 and 8 of the '142 Patent (§§ 25–46). Claim 5 involves transmitting virtually separated
26 streams to Optical Network Units (ONUs), which the AC describes as being achieved
27 through AT&T's use of VRF for virtual separation and distribution of data streams,
28 consistent with its PON-based network components. (§§ 25-28). Claim 8 involves

1 transmitting data streams using PON network components, including ONUs and
2 Optical Line Terminals (OLTs), to enable secure and scalable delivery of information.
3 The AC (¶¶ 38–46) maps this claim to AT&T’s network by describing how ONUs are
4 used to receive and process virtually separated data streams, and how OLTs facilitate
5 data distribution, aligning with the patented methods.

6 The AC meets and exceeds the pleading standards for patent infringement
7 articulated in the cases cited by AT&T. AT&T mischaracterizes SPADA’s
8 allegations, claiming that they do not state sufficient facts to constitute a “plausible”
9 case of patent infringement. As explained below, contrary to AT&T’s claims, The AC
10 contains detailed and specific allegations that identify the accused instrumentalities,
11 the key components involved in the infringement, and how those components operate
12 to practice the asserted claims. These allegations surpass the pleading requirements
13 set forth in relevant case law and provide AT&T with more than sufficient notice of
14 the claims against it. SPADA has provided detailed factual allegations tying AT&T’s
15 PON-based fiber Internet services and related technologies to each element of
16 SPADA’s patent infringement claims. Nothing more is required under the liberal
17 pleading standards applicable to patent infringement claims.¹

18 2. The Complaint Identifies the Accused Services

19 The AC identifies AT&T’s PON-based high-speed fiber services as the accused
20 instrumentalities (¶ 10). These include GPON (Gigabit PON) and XGS-PON (10
21 Gigabit Symmetrical PON) technologies, which enable AT&T to deliver multi-
22 gigabit symmetrical speeds, low-latency connectivity, and scalable broadband
23 services. As set forth in the AC (¶ 10), AT&T advertises and offers such services for
24

25 ¹ See, e.g., *K-Tech Telecommunications, Inc. v. Time Warner Cable, Inc.*, 714 F.3d
26 1277 (Fed. Cir. 2013) (holding that a case for patent infringement was stated even
27 though “K–Tech cannot point to the specific device or product within TWC’s or
28 DirecTV’s systems that translates the digital television signals each receives” as “the
operation of those systems is not ascertainable without discovery”).

1 sale to residential and business customers in the Central District of California and
2 throughout the United States, including through the att.com website and at AT&T-
3 branded retail stores. By explicitly naming these services, SPADA provides the
4 requisite specificity for identifying the accused products or methods.

5 The identification of these services is consistent with *Disc Disease Solutions*
6 *Inc. v. VGH Solutions, Inc.*, 888 F.3d 1256, 1259 (Fed. Cir. 2018), where the Federal
7 Circuit held that precisely identifying accused products, combined with allegations of
8 infringement, sufficiently meets the “plausibility” notice pleading requirements of
9 Rule 8(a). The Federal Circuit rejected the District Court’s conclusion that the
10 plaintiff had failed to “explain how Defendants’ products infringe on any of Plaintiff’s
11 claims” because it “merely alleges that certain of Defendants’ products ‘meet each
12 and every element of at least one claim’ of Plaintiff’s patents.” *Id.* at 1260. The Federal
13 Circuit concluded that it was sufficient to meet the pleading standard that the
14 “complaint specifically identified the three accused products” and “alleged that the
15 accused products meet “each and every element of at least one claim of
16 the '113 [or '509] Patent, either literally or equivalently,” as “[t]hese disclosures and
17 allegations are enough to provide VGH Solutions fair notice of infringement of the
18 asserted patents.” *Id.*

19 Similarly, in *Incom Corp. v. Walt Disney Co.*, No. CV15-3011 PSG (MRWX),
20 2016 WL 4942032, at *3 (C.D. Cal. Feb. 4, 2016), the United States District Court
21 for the Central District of California declined to dismiss a complaint that attached the
22 asserted patent, identified the accused products by name, and generally compared the
23 technology disclosed in the patents to the accused products. The complaint did not
24 identify any specific asserted claim, but the court found that “Plaintiff has stated a
25 plausible claim for direct infringement by specifically identifying Defendants’
26 products and alleging that they perform the same unique function as Plaintiff’s
27 patented system.” *Id.*; see also *Bender v. LG Elecs. U.S.A., Inc.*, No. C 09-02114 JF
28 (PVT), 2010 WL 889541, at *6 (N.D. Cal. Mar. 11, 2010)

1 (*Twombly* and *Iqbal* require plaintiffs to include “a brief description of what the
2 patent at issue does and an allegation that certain named and specifically identified
3 products or product components also do what the patent does, thereby raising a
4 plausible claim that the named products are infringing”).

5 The United States District Court for the Eastern District of Texas also has
6 refused to require an element-by-element analysis in a complaint, instead relying on
7 a party’s infringement contentions to provide this detailed analysis. In *Uniloc USA v.*
8 *Avaya, Inc.*, No. 6:15-CV-1168-JRG, 2016 WL 7042236, at *2 (E.D. Tex. May 13,
9 2016), the court denied a motion to dismiss, despite the defendant’s claim that the
10 plaintiff’s claim contained “nothing more than ‘threadbare recitals of elements’ and
11 ‘conclusory statements’” when the complaint (1) identified the asserted patent claims;
12 (2) identified specific accused products; and (3) identified functionality within those
13 products that allegedly infringed the asserted claims. This information was sufficient
14 to satisfy *Twombly-Iqbal*, as the court found that “[r]equiring more would improperly
15 and unfairly elevate the plausibility standard to a probability standard.” *Id.* at *4. The
16 court rejected the defendant’s argument that the plaintiff “must include element-by-
17 element infringement contentions within the original complaint to properly state a
18 claim for direct infringement,” and noted that it “declines to infuse Federal Rule of
19 Civil Procedure 8(a)’s well-established pleading standard with such a heightened
20 burden at the initial pleading stage.” *Id.* at *3.

21 These cases make clear that SPADA’s identification of AT&T’s PON-based
22 high-speed fiber services, including GPON and XGS-PON technologies, as accused
23 instrumentalities, coupled with the descriptions of their functionalities, meets the
24 requirements under *Twombly/Iqbal*.

25 3. The Complaint Identifies Key Components and Their Roles

26 Contrary to ATT’s claims, and even though it was not legally required to do so,
27 SPADA has also clearly detailed the specific components within AT&T’s network
28 that perform the patented steps. The AC (at ¶¶ 16-46) describes how the infringement

1 occurs via the OLTs, ONUs, and passive optical splitters, which perform the patented
2 steps including receiving private data streams, aggregating them, and delivering them
3 to user devices.

4 OLTs are identified as receiving private data streams intended for specific
5 subscribers and performing operations required to virtually separate those streams (¶¶
6 16–20, 22, 27–31, 33, 38–42, 44). ONUs are described as endpoints that transmit
7 extracted data streams to end-user devices (¶¶ 16, 18, 20–24, 27, 29, 31–35, 38, 40,
8 42–46). Passive optical splitters are highlighted as facilitating the aggregation and
9 distribution of common data streams (¶¶ 16, 27, 38).

10 In the case of *Novitaz, Inc. v. inMarket Media, LLC*, 2017 WL 2311407 (N.D.
11 Cal. May 26, 2017), cited by AT&T, the court emphasized that the complaint must
12 address every claim limitation with sufficient factual support. SPADA achieves this
13 by linking the roles of OLTs, ONUs, and passive optical splitters to the claim steps,
14 such as receiving, virtually separating, aggregating, and distributing private data
15 streams (¶¶ 16–24).

16 **4. The Complaint Explains Operational Details**

17 SPADA has also identified the operational details used by AT&T to conduct
18 the infringing activities. The AC (at ¶¶ 17 and 28) explains how AT&T’s network
19 receives virtually separated data streams from VRF in compliance with RFC 4364.
20 The AC details how AT&T’s use of such data streams supports the secure and scalable
21 transmission of data and connects this functionality to AT&T’s XGS-PON and GPON
22 deployments.

23 In *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d
24 1323, 1335–36 (Fed. Cir. 2012), the Federal Circuit explained that a complaint is
25 sufficient if it plausibly alleges that an accused product or service practices each claim
26 limitation. The court rejected the defendants’ argument that “the amended complaints
27 are deficient because they do not describe precisely how each element of the asserted
28 claims are practiced by their customers,” noting that this “argument is premised on a

1 pleading standard that is too stringent,” and that a plaintiff is not required “to plead
2 facts establishing that each element of an asserted claim is met” or even to “identify
3 which claims it asserts are being infringed.” *Id.* Accordingly, the court found patent
4 infringement allegations to be sufficient where the complaint “states that the patent is
5 being infringed by use of the patented method by specific ... customers, and it
6 references specific claim elements that [the plaintiff] asserts are being practiced. As
7 such, the complaint provides [the defendant] with information about which claims of
8 the patent [the plaintiff] asserts are being infringed, and by whom, and about the
9 activities [the plaintiff] believes constitute infringement.” *Id.*

10 SPADA’s allegations go further than what is required by the pleading standard,
11 explaining how VRF operates within AT&T’s network to perform critical functions
12 such as virtual separation of data streams. These operational details distinguish
13 Spada’s AC from those dismissed for merely parroting claim language.

14 **C. Documents Subject to Judicial Notice and Incorporated by**
15 **Reference in the Complaint Support the Infringement Allegations**

16 SPADA’s infringement allegations are further substantiated by documents
17 subject to judicial notice and incorporated by reference in the AC. These materials
18 include AT&T’s own publications, technical standards like RFC 4364, and
19 government contracts, all of which demonstrate AT&T’s reliance on technologies
20 such as VRF and PON systems. These documents substantiate SPADA’s claims by
21 showing AT&T’s implementation of VRF for data stream separation and its
22 compliance with industry standards, which align with SPADA’s patented methods.

23 Judicial notice is appropriate because the documents are publicly available and
24 not subject to reasonable dispute. They are either published by AT&T on its corporate
25 websites, authored by authoritative standards organizations, or sourced from official
26 government repositories. Courts frequently take judicial notice of such materials, as
27 in *In re Google Assistant Privacy Litigation*, 457 F. Supp. 3d 797, 812 (N.D. Cal.
28 2020) (judicially noticing publicly accessible documents).

1 If the Court determines that judicial notice is not appropriate, SPADA requests
2 leave to amend its complaint to incorporate the contents of these documents directly
3 into its allegations. Courts freely grant leave to amend when justice so requires. *See*
4 *Foman v. Davis*, 371 U.S. 178, 182 (1962).

5 SPADA respectfully refers the Court to its accompanying Request for Judicial
6 Notice, which provides a detailed explanation of the documents and their relevance
7 to the issues presented.

8 **III. AT&T’S ARGUMENTS FOR DISMISSAL ARE MERITLESS**

9 **A. AT&T’s “Background” Arguments Fail**

10 AT&T’s arguments in the Background section of its Motion that the AC is
11 deficient (Motion 14-16) are meritless and mischaracterize the averments in the AC.
12 AT&T first argues that the AC fails to provide any plausible basis that a PON OLT
13 receives a data stream having the claimed properties (*i.e.*, a private data stream that is
14 virtually separated using VRF). AT&T is wrong. Paragraph 17 of the AC, for
15 example, avers that the streams received by AT&T’s PONs are virtually separated
16 using VRF, supported by the averments concerning the “anti-spoofing MPLS label
17 per the RFC 4381 Standard’s Section 3.4” and “VRF is used to generate virtually
18 separate private data streams in accordance with the RFC 4364 Standard and the
19 supporting RFC 4381 Standard and RFC 4382 Standard.” SPADA’s averments make
20 plain to those with any technical understanding that the private data streams are
21 virtually separated – as AT&T must know. AT&T has continually promoted since at
22 least 2011 that these standards provide virtual separation that is critical to security.
23 AT&T’s disingenuous argument thus fails. Likewise, AT&T’s attempt to ignore the
24 significance of SPADA’s references to these RFCs in the AC (Motion 16) fails
25 because AT&T has embraced those RFCs as critical to the security of the information
26 it transmits to ISPs.

27 AT&T next argues that the AC does not identify the specific PON “interface
28 router” equipment that receives such data streams. There is no need for the AC to do

1 so. AT&T does not dispute that those signals are received by its PONs, so those
2 signals must first be received by some router. AT&T next complains that the AC does
3 not “explain what a PON interface router is.” That complaint is baseless. “PON
4 Interface Router” is not a term of art, so its meaning in the claims is determined by
5 how it is used in SPADA’s patents. As used in SPADA’s patents, “PON Interface
6 Router” has the plain-English meaning of the words in that phrase (*i.e.*, a router that
7 interfaces with a PON, enabling connection of signals received by the router to be
8 transmitted to the PON). There is no question AT&T must use a router that performs
9 this function, and its argument about the adequacy of the AC as to “PON interface
10 router” thus fails.

11 Finally, AT&T argues that that the AC does not assert that practicing the PON
12 standards would necessarily result in meeting the receiving limitation in the claims of
13 SPADA’s patents. AT&T again misleads. There are standards for creating virtually
14 separated data streams, and there are *different* standards that govern how PONs
15 operate. Both sets of standards apply here to different aspects of SPADA’s claimed
16 method. Before and at the time of the invention, however, there was no standard that
17 described how data streams virtually separated using VRF are sent to a PON and
18 conveyed through such PON. That combination is what SPADA invented and
19 patented, and what *AT&T chose to use for its own commercial reasons*, thereby
20 infringing SPADA’s patents.

21 **B. AT&T’s Arguments About Direct Infringement Fail**

22 AT&T’s arguments concerning SPADA’s pleading about *the generation of*
23 data streams having the claimed properties (Motion 16-17) fail because the claims of
24 SPADA’s infringed patents require only that such data streams be received, not how
25 they are generated. Thus, AT&T’s arguments fail because they relate to devices and
26 methods that are not claimed. As discussed above, the AC adequately avers that the
27 data streams received by AT&T’s PONs have the claimed properties. AT&T’s
28 argument that the AC does not identify “the source of the ‘data streams’” (Motion 16-

1 17) fails for the simple reason that generation of the data streams is not claimed. All
2 that matters is that such data streams are **received**. They are. It does not matter how
3 those data streams are generated or what equipment is used to generate them.
4 Therefore, it does not matter whether the AC identifies the equipment or methods that
5 generate such data streams. Likewise, it does not matter what “portion of a network
6 formats ‘data steams’” or where “any functionality described in the RFCs that the
7 FAC relies on is performed by any component or device in AT&T’s network” (Motion
8 17). AT&T’s argument fails because it is irrelevant to the asserted infringement of
9 SPADA’s patent claims.

10 Equally misplaced is AT&T’s argument that SPADA “fails to allege that the
11 RFCs are mandatory standards” (Motion 17). The point is that AT&T chose to follow
12 the RFC’s because AT&T has concluded they are critical to security (AC ¶17), and
13 following those RFCs results in in the creation of the data streams claimed in
14 SPADA’s patents. AT&T chose to follow those RFCs, regardless of whether or not it
15 was required to do so. Thus, even if AT&T were not required to follow those RFCs,
16 it infringes.

17 1. **AT&T’s Data Stream Generation Arguments Fail**

18 AT&T’s argument that SPADA’s citation to RFCs “Cannot Plausibly State A
19 Claim For Infringement Because the FAC Does Not Link The Cited Functionality To
20 An Actual Device” (Motion 17-20) fails because AT&T’s argument is directed to
21 **unclaimed** functionality and devices. Again, the claimed method recites data streams
22 having certain functionality **that are received – not how those data streams are**
23 **generated**. Thus, it does not matter whether the AC identifies “any devices or
24 equipment in AT&T’s network that allegedly perform any functionality in the cited
25 RFCs” (Motion 17-18). The RFCs merely demonstrate that the data streams received
26 by AT&T’s PONs have the claimed properties. Thus, AT&T’s arguments about
27 assuming “some unnamed device” performs the functionality of generating a data
28 stream are unavailing. The AC avers that such data streams are received – which is

1 all that the claims require. How they are generated is irrelevant to SPADA’s claims.

2 AT&T again argues that the AC does not adequately identify a PON interface
3 router (Motion 18 n.3). As explained above, “PON Interface Router” is defined by
4 how it is used in SPADA’s patents. It is a router that interfaces with a PON, enabling
5 connection of signals received by the router to be transmitted to the PON. AT&T’s
6 argument is thus premised on its deliberate ignorance of the terms of SPADA’s
7 patents. There is no question that AT&T uses a router that performs this function.
8 Thus, SPADA has adequately identified that this step of its claimed method claims is
9 performed by AT&T. AT&T’s argument ignores that and misconstrues SPADA’s
10 claims as apparatus claims.

11 AT&T next argues that the AC does not identify the specific PON “interface
12 router” equipment that receives such data streams. There is no need for the AC to do
13 so specifically. AT&T does not dispute that those signals are received by its PONs,
14 so those signals must first be received by some router. AT&T next complains that the
15 AC does not “explain what a PON interface router is.” That complaint is baseless.
16 “PON Interface Router” is not a term of art, so its meaning in the claims is determined
17 by how it is used in SPADA’s patents. As used in SPADA’s patents, “PON Interface
18 Router” has the plain-English meaning of the words in that phrase (*i.e.*, a router that
19 interfaces with a PON, enabling connection of signals received by the router to be
20 transmitted to the PON). There is no question that AT&T uses a router that performs
21 this function, and its argument about the adequacy of the AC’s lack of identification
22 of the “PON interface router” fails.

23 AT&T’s arguments about Paragraph 17 of the AC (Motion 17-20) also fail. Yet
24 again, AT&T misreads the method claims of SPADA’s patents as including the
25 functionality of virtually separating private data streams using VRF. They do not. All
26 the claims require is that such data streams be received for use in the patented methods
27 – not the functionality of creating such data streams. The averments in Paragraph 17
28 of the AC are directed to what is claimed, *i.e.*, that the received signals have these

1 properties:

2 These virtually separated private data streams are comprised of pre-
3 appended anti-spoofing MPLS labels per the RFC 4381 Standard's
4 Section 3.4, titled Label Spoofing. The CE router and all other devices,
5 including the PON, receive and pass IP packets, without recognizing in
6 them the pre-appended MPLS label or interfering with the MPLS label.
7 VRF is used to generate virtually separate private data streams in
8 accordance with the RFC 4364 Standard and its supporting RFC 4381
9 Standard and RFC 4382 Standard.

10 AT&T's arguments concerning what component in AT&T's network performs
11 the functionality of virtual separation (Motion 19) fail because that is **not claimed** in
12 the infringed methods of SPADA's patents. AT&T is also wrong when it says, "If the
13 mere existence of those RFCs are sufficient to plausibly plead infringement, then they
14 equally demonstrate that the Asserted Claims are invalid" (Motion 19). Contrary to
15 AT&T's suggestion, the RFCs merely show the properties of data streams. What
16 causes infringement is the combination of those data streams with a PON to send data
17 streams to intended user devices. That is what SPADA invented and patented. And
18 that is what AT&T does, thereby infringing SPADA's patents.

19 For that same reason, AT&T's argument that practicing the referenced passages
20 of the RFCs would not always result in infringement (Motion 20) fails. AT&T
21 misunderstands and mischaracterizes the AC. Practicing the referenced passages
22 ***combined with*** PONs receiving and operating on the resulting virtually separated data
23 stream – which AT&T does – is what results in infringement.

24 AT&T concedes that the AC "alleges that 'VRF is used to generate virtually
25 separate private data streams in accordance with the 4364 Standard and its supporting
26 RFC 4381 Standard and RFC 3482 Standard'" (Motion 20), but then misleads arguing
27 that these are not standards that must be complied with and suggesting they may be
28 optional (Motion 20-21). Even if AT&T were correct about that, its argument fails

1 because AT&T has elected to follow those standards in promoting those standards as
2 essential to providing security. Thus, AT&T's argument about the cited RFC's
3 defining non-mandatory functionality (Motion 22) fails.

4 AT&T's argument that "[n]one of the RFC documents make any reference to
5 PONs or optical network" (Motion 22-23) fails because the RFCs do not relate to
6 PONs or to optical networks. AT&T makes the same flawed argument, yet again. The
7 RFCs relate to virtual separation of data streams and to the properties of those data
8 streams. AT&T provides those data streams to its PONS for use of the patented
9 method. The cited RFCs say nothing about how such data streams are used – in PONs
10 or anywhere else. Thus, all that matters about the RFCs are the properties of the data
11 streams AT&T's PONs receive. The claimed steps of the patent methods all relate to
12 steps that occur after data streams are received. The RFCs have nothing to do with
13 that, or to AT&T's decision to combine virtually separated data streams for
14 subsequent use with the functionality of PONs, which infringes SPADA's patents.

15 AT&T's argument about the last three sentences of Paragraph 7 of the AC
16 (Motion 23) is irrelevant. These sentences provide background information, not
17 information relating to any claim imitation.

18 AT&T's arguments about Paragraph 16 of the AC (Motion 23-25) fail because
19 they mischaracterize Paragraph 16, which relates to the claim limitation:

20 receiving from at least one passive optical network (PON) interface
21 router out of a plurality of PON interface routers at a PON optical line
22 terminal (OLT), at least one private data stream out of a plurality of data
23 streams.

24 As Paragraph 16 avers, publicly available information shows that AT&T advertises
25 PON-based high-speed fiber services, and the use of PONs to provide its advertised
26 speeds. Paragraph 17 of the AC provides support for the averment that the received
27 signals are virtually separated private data streams. And a PON interface router, as
28 explained above, is a router that interfaces with the PON, enabling connection of

1 signals received by the router to be transmitted to the PON. There is no question that
2 AT&T must use a router that performs this function. As Paragraph 16 of the AC avers,
3 AT&T may accomplish this function in one of two ways:

4 An OLT can receive private data streams directly from a PON interface
5 router, or indirectly via a network aggregation switch connected between
6 one or more PON interface routers and the OLT.

7 Regardless, AT&T must perform this step of SPADA's method claims, and AT&T's
8 argument is meritless.

9 AT&T's reliance on *Teradyne, Inc. v. Astronics Test Sys., Inc.*, No. CV 20-
10 2713-GW-SHKx, 2020 WL 13593156 (C.D. Cal. Aug. 7, 2020) is misplaced. Unlike
11 in *Teradyne*, where the plaintiff merely tracked claim language without identifying
12 accused products, SPADA has specifically identified AT&T's PON-based fiber
13 services and explained through technical documentation (the RFCs) exactly how these
14 services embody the claimed functionality. SPADA does not simply recharacterize
15 claim language, but rather provides concrete factual allegations about how AT&T's
16 use of data streams formed by VRF and MPLS with its PON systems practices the
17 claimed methods. The RFCs cited in the complaint detail the specific properties of
18 data streams that AT&T employs, providing far more substantive allegations than the
19 conclusory pleading found insufficient in *Teradyne*.²

20 **C. AT&T's Argument About the Doctrine of Equivalents Fails**

21 This is a case for literal infringement, not for infringement under the doctrine
22

23 ² AT&T also mischaracterizes the holding in *CyboEnergy, Inc. v. N. Elec. Power*
24 *Tech., Inc.*, 721 F. Supp. 3d 1050, 1053 (N.D. Cal. 2024) (Motion 9), which stands
25 for the unremarkable proposition that a direct infringer must perform all of the steps
26 of a method claim, and it is not enough to sell equipment to others for them to
27 perform a claimed method. In *CyboEnergy*, the defendant just sold equipment to
28 others. Here, the AC makes clear that AT&T itself performs all of the steps of
SPADA's claimed methods and does not merely provide equipment to others who
may have performed the claims method.

1 of equivalents. Although SPADA is not presently aware of any defense to AT&T's
2 infringement – and AT&T has provided none – SPADA appreciates that, as this case
3 proceeds, AT&T may offer some infringement defense. If so, SPADA expects that
4 any defense AT&T offers would, at most, be only an assertion by AT&T of an
5 insubstantial difference from what is literally claimed in SPADA's claims. In that
6 hypothetical event, AT&T would still infringe based on the doctrine of equivalents.
7 *See Mylan Institutional LLC v. Aurobindo Pharma Ltd.*, 857 F.3d 858 (Fed. Cir.
8 2017).

9 While this is a case of literal infringement, the doctrine of equivalents provides
10 an alternative basis for establishing infringement. Under this doctrine, a finding of
11 infringement can occur even if the accused technology does not precisely match the
12 patent claims, but instead uses substantially the same means to accomplish
13 substantially the same result. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*,
14 339 U.S. 605, 608 (1950). Accordingly, SPADA has included this hypothetical,
15 alternative basis for infringement in the AC: "Defendants have directly infringed and
16 continue to directly infringe, literally and/or under the doctrine of equivalents" (AC
17 ¶¶ 49, 52). Unless and until AT&T offers some defense to its infringement, SPADA
18 does not claim infringement under the doctrine of equivalents, and SPADA expects
19 that its claim against AT&T will likely remain a claim for literal infringement, even
20 if AT&T proffers some alleged defense to infringement.

21 Accordingly, there is no basis to dismiss SPADA's alternative claim for
22 infringement based on the doctrine of equivalents.

23 **D. AT&T's Argument About Willful Infringement Fails**

24 AT&T's argument that SPADA's willful infringement claim should be
25 dismissed (Motion (26-29) fails for a number of reasons. First, AT&T tries to escape
26 its willful infringement by saying SPADA failed to plead direct infringement (Motion
27 26). As discussed above, AT&T is wrong about that because, among other things, it
28 mischaracterizes the relevance of the pleadings about the RFC standards in its failed

1 attempt to argue that the AC is defective because it does not say how separated data
2 streams are generated, ***which is not claimed in SPADA's patents.***

3 Second, AT&T misreads SPADA's AC and ignores the facts when it argues
4 that the AC fails to plead AT&T's knowledge of its infringement. As set forth in
5 Paragraph 13 of the AC, on May 30, 2024, SPADA provided AT&T "with knowledge
6 of the patents ***and the allegation that their AT&T PON-based high-speed Fiber***
7 ***services infringe these patents***" (emphasis supplied). On that day, SPADA not only
8 identified both the '898 patent-in-suit and the '142 patent-in-suit, but also – as AT&T
9 knows – provided AT&T with the identity of SPADA's website that contains
10 infringement claim charts and told AT&T that those claim charts explain why AT&T
11 should license the asserted SPADA patents. After months, AT&T had no response to
12 SPADA's infringement assertions. Thus, AT&T's suggestion that the averments in
13 the AC are insufficient because "the FAC must plead that AT&T had knowledge of
14 its ***infringement*** of those patents" (Motion 28; emphasis original) is wrong and relies
15 entirely on AT&T's misrepresentation of the facts.

16 AT&T's willful infringement is evident from its actions following SPADA's
17 direct notice. On May 30, 2024, SPADA provided AT&T with comprehensive
18 information about the patent infringement, including specific identification of the '898
19 and '142 patents, detailed explanation of how AT&T's network technologies infringe
20 these patents, and direct invitation to license the patented technology. Despite
21 receiving this explicit notice, AT&T deliberately continued to use SPADA's patented
22 technology without seeking a license, challenging the infringement allegations, or
23 modifying its network infrastructure. Such deliberate continuation of infringing
24 activities, in the face of clear notice, constitutes willful infringement under established
25 patent law principles.³

26
27 ³ The cases cited by AT&T are inapposite. In *E-Vision Optics, LLC v. Luxottica Grp.*
28 *S.p.A.*, No. SA CV 23-02013-AB (SHKX), 2024 WL 1601853 (C.D. Cal. Mar. 8,
2024), E-Vision Optics failed to identify any specific accused products. SPADA has

1 **IV. THE COURT SHOULD PERMIT SPADA TO AMEND**

2 For the forgoing reasons, SPADA believes AT&T's Motion should be denied.
3 In the event the Court finds any aspect of the AC insufficient, SPADA respectfully
4 requests leave to amend. Consistent with the liberal amendment standards established
5 in *Foman v. Davis*, 371 U.S. 178, 182 (1962), SPADA stands prepared to promptly
6 supplement its pleadings with any additional detail the Court deems necessary to fully
7 and transparently demonstrate AT&T's infringement of SPADA's patents.

8 **V. CONCLUSION**

9 SPADA's AC provides a meticulously detailed and legally sufficient account
10 of AT&T's direct infringement. The complaint not only meets but exceeds the
11 pleading requirements for patent infringement cases, supported by AT&T's own
12 public documentation and independently verifiable technical standards. AT&T's
13 Motion represents a misguided attempt to obscure the clear technological similarities
14 between its network implementation and SPADA's patented innovations.
15 Accordingly, this Court should deny AT&T's Motion.

16
17
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19
20 explicitly identified AT&T's PON-based Fiber services and provided claim charts
21 showing infringement. In *Entropic Commc'ns, LLC v. Comcast Corp.*, 702 F. Supp.
22 3d 954 (C.D. Cal. 2023), the plaintiff failed to identify what was communicated about
23 infringement. SPADA's notice specifically identified both patents and the accused
24 method used to provide PON-based services and directed AT&T to claim charts
25 explaining the basis for infringement. In *Provisur Techs., Inc. v. Weber, Inc.*, No.
26 2023-1438, 2024 WL 4363502 (Fed. Cir. Oct. 2, 2024), the defendant knew of the
27 patents but had no knowledge of alleged infringement. SPADA explicitly informed
28 AT&T of both the patents' existence and specific infringement allegations regarding
AT&T's PON-based services. Unlike in *Vaporstream, Inc. v. Snap Inc.*, No. 2:17-
CV-00220-MLH-KSX, 2020 WL 136591 (C.D. Cal. Jan. 13, 2020), SPADA has
provided specific notice of infringement, with claim charts. And, unlike *Ravgen, Inc.*
v. *Quest Diagnostics Inc.*, No. 2:21-CV-09011 RGK (GJS), 2022 WL 2047613 (C.D.
Cal. Jan. 18, 2022), which related only to post-suit conduct, SPADA's willfulness
claim is based on pre-suit conduct, including the May 30, 2024 notice and clam charts,
and AT&T's subsequent inaction despite having access to SPADA's detailed
infringement analysis.

1 Dated: November 25, 2024

Respectfully submitted,

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6
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10 **CERTIFICATE OF COMPLIANCE**

11 The undersigned, counsel of record for Plaintiff Spada Innovations, Inc.,
12 certifies that this brief contains 6876 words, which complies with the word limit of
13 L.R. 11-6.1.

14
15 November 25, 2024

/s/ J. Raza Lawrence

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