UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF FLORIDA

GLOBAL COMMUNICATIONS, INC.,

Plaintiff, CASE NO.

v.

PDI COMMUNICATIONS, INC.,
NORTH AMERICAN CABLE EQUIPMENT, INC.,
PERFECTVISION MANUFACTURING, INC., and
DSI SYSTEMS, INC.,
Defendants.
_____/

COMPLAINT FOR DAMAGES AND INJUNCTIVE RELIEF
(JURY TRIAL REQUESTED)

Plaintiff GLOBAL COMMUNICATIONS, INC. ("GLOBAL COM") sues PDI COMMUNICATIONS, INC. ("PDI"), NORTH AMERICAN CABLE EQUIPMENT, INC. ("NORTH AMERICAN"),PERFECTVISION MANUFACTURING, INC. ("PERFECT 10", and DSI SYSTEMS, INC. ("DSI") for infringement of certain patents held by GLOBAL COM, and alleges:

THE PARTIES, JURISDICTION AND VENUE

1. GLOBAL COM is a Florida corporation having its principal place of business in Tallahassee, Florida, and it is the holder of certain patents as described in this Complaint.

2. Each of the Defendants is a satellite Master System Operator ("MSO") which sells infringing equipment into the Northern District of Florida.

3. PDI is a Florida corporation, having its principal place of business in Boca Raton, Florida, and during the times

relevant to this case, sold infringing equipment into the Northern District of Florida .

4. NORTH AMERICAN is a Pennsylvania corporation, having its principal place of business in West Chester, Pennsylvania, and during the times relevant to this case sold infringing equipment into the Northern District of Florida.

5. PERFECT 10 is a privately held corporation, having its principal place of business in North Little Rock, Arkansas, and during the times relevant to this case had various distribution centers located throughout the country, including the State of Florida, and sold infringing equipment into the Northern District of Florida.

6. DSI, which promotes itself as “the nation’s largest distributor of satellite and consumer electronic equipment,” has its principal place of business in Des Moines, Iowa, and during the times relevant to this case maintained various locations throughout the country, including the State of Florida, and sold infringing equipment into the Northern District of Florida.

7. This action arises under 28 U.S.C. §1338(a); the events giving rise to this cause of action occurred in the Northern District of Florida; and jurisdiction is proper in this court.

8. Venue is proper in this court.

9. All conditions precedent to bringing this suit have been performed or have been waived.

GENERAL ALLEGATIONS

10. GLOBAL COM was formed in the 1980's to develop technology and hardware relating to the home satellite television market.

11. GLOBAL COM has consistently sought to develop, patent, and market new technology.

12. The home satellite television market began as unauthorized interception of satellite broadcasts intended for network affiliates. In the late 1980's the signals were scrambled, and a system whereby subscribers would pay for the use of set-top descramblers was created. However, the subscriber service was a "by product" of a technology that was not designed for home use.

13. In the early 1990's several companies sought to develop a satellite television system that was specifically designed for home use. The first operational system was launched by SkyPix in 1992, to limited success.

14. Around the same time period Hughes Communications, Inc. – an established satellite communications provider – decided to enter the home satellite television market. Hughes called its system "DirecTV." By 1994, Hughes had launched two

high-powered Ku-band satellites designed specifically for its DirecTV system.

15. The DirecTV satellite signal is received by a relatively small dish mounted on or near the exterior of a subscriber's home. The dish includes a focusing reflector that concentrates the satellite's signal to a feed horn. A low-noise block ("LNB") then selects a subset of the available satellite signals as directed by a television "set top box" and feeds them into a coaxial cable. The coaxial cable transmits the signals to the controlling set top box (alternatively referred to as an "STB", or a "receiver"). The STB actually decodes the signals and creates the video images displayed on the user's television.

16. The frequencies used for satellite communications (typically in the 10 - 20 gigahertz range) are not suitable for transmission over a coaxial cable between the dish and the receiver. They must be converted to much lower frequencies – typically 950-1450 megahertz - in a process which is commonly referred to as "down converting." Circuitry associated with the LNB often performs the down converting. For this reason, an LNB is sometimes referred to as a low-noise block down converter.

17. Early in the development of home satellite technology, GLOBAL COM realized a significant shortcoming in the systems being developed. The selection of the subset of signals down

converted by an LNB is actually controlled by the set top box. When a user selects a particular channel, the LNB has to select the appropriate subset of data available on the feed horn for that channel.

18. This arrangement created a one dish/one television paradigm. Each dish had to be linked to a single receiver that controlled it. Unlike the existing cable systems, a user having two or more televisions feeding from the same dish had no ability to independently select the channels for each television. While a single dish could feed multiple televisions, all televisions would receive the same program.

19. The problem was even worse for multi-dwelling units ("MDU's") such as apartment complexes and condominiums. MDU owners had reached arrangements with cable providers to provide independent service to each residential unit. In order to provide such a service using a satellite system, a separate dish had to be provided for each individual residential unit and each dish had to have a clear line of sight to the satellite.

20. GLOBAL COM foresaw the problems that dish satellite television systems would encounter in seeking to displace cable installations for homes with multiple television sets and for Multi Dwelling Units. Even before the creation of dedicated

home satellite systems, GLOBAL COM was working on a solution to this multi-receiver problem.

21. GLOBAL COM developed hardware specifically designed for digital downlink satellite signals (as opposed to the analog signals that had existed in the satellite communication world prior to the early 1990's). As an example, GLOBAL COM was the first company to successfully field a spectrum analyzer for field technicians to use in installing and correctly orienting digital dishes (its GS-1000 hardware). The GS-1000 underwent testing in the summer of 1992. Product development continued through 1993 and 1994.

22. By late 1994 the home satellite television market had taken off. However, the single dish/single television problem persisted. The problem stemmed from the inability to feed signals of more than one polarity from the LNB to the set top box at one time on a single coaxial cable.

23. GLOBAL COM recognized that some of its MDU technology could be applied to solve this problem. On Feb. 22, 1995, GLOBAL COM filed a patent application entitled "Satellite Broadcast Receiving and Distribution System" (U.S. Patent Application No. 08/838,677). This application disclosed GLOBAL COM's "frequency stacking" technology which allows multiple satellite signals to be sent over a single coaxial cable.

24. In the terminology used in U.S. patent prosecution, the Feb. 1995 filing became a "parent" application for numerous "child" applications which disclosed additional improvements and developments made by GLOBAL COM. The patents resulting from these filings have become known as the "Single Wire" patents. They are referred to as the Single Wire patents because they pertain to various hardware and methods for controlling and transmitting multiple satellite signals over a single coaxial cable or optical fiber "wire." The technology embodied in the Single Wire patents solved the one dish/one television problem.

25. Stated very simplistically, the Single Wire technology "stacks" multiple signals on a single coaxial cable by using a front-end "stacker" and a back-end "destacker." The stacker is located on the input end of the coaxial cable. The destacker is located on the output end. The stacker assigns non-interfering frequency blocks to each signal that is to be fed onto the cable. It then converts each raw signal to the desired frequency block before feeding it onto the cable. Multiple signals are then fed down the same cable. They do not interfere because they reside in different frequency bands. The destacker reverses the process by splitting the stacked signals, converting each individual signal back to a normal frequency block, and placing each individual signal on a single coaxial

cable or optical fiber output "wire." For example, if four separate signals are stacked over the cable leading from the stacker, the destacker would have four separate output cables – each carrying one of the signals. These four output cables might go to four separate televisions (each of which could then be individually tuned) to a different channel.

26. In early 1995, GLOBAL COM made contact with DirecTV. GLOBAL COM represented that it had developed a solution to the one dish/one receiver problem and offered to work with DirecTV to integrate the solution into the existing system. Over the next several months, GLOBAL COM provided technical information regarding its products to DirecTV.

27. In September of 1996, GLOBAL COM began advertising its Single Wire technology in *Private Cable & Wireless Cable* magazine. GLOBAL COM received numerous responses and began discussing the licensing of its technology.

28. Around the same time period, GLOBAL COM, Heifner Communications ("HCI"), and Foxcom began alpha testing GLOBAL COM's "Digital Wave" hardware with Foxcom's SDTV fiber-optic delivery system. The combined system allowed MDU subscribers to choose between a traditional cable system, a satellite system, or both (all within a single MDU environment and using a single coaxial cable to each subscriber).

29. In February of 1997, GLOBAL COM, HCI, and Foxcom again collaborated to demonstrate the Single Wire technology in an integrated system. The system was demonstrated to Echostar, Primestar, and DirecTV. The same system was also demonstrated at the Satellite Broadcasting and Communications Association ("SBCA") show in Las Vegas (March of 1997).

30. In September of 1997 DirecTV undertook a detailed evaluation of the system developed by GLOBAL COM, HCI, and Foxcom (the "combined Digital Wave system"). DirecTV gained access to and evaluated a fully operating system, including all the hardware. The persons involved in this testing were Dipak Shaw of DirecTV, Ivan Moore of HCI, Mor Allon of Foxcom, and Austin Coker of GLOBAL COM.

31. In October of 1997, *Private Cable & Wireless Cable* magazine ran a cover story explaining the features of the combined Digital Wave system. The magazine ran additional stories covering other facets of the Single Wire technology in additional issues.

32. Around the same time period, it was becoming apparent that phone service providers having fiber optic networks would soon be able to provide television programming as well. The Single Wire technology offered advantages in this field as well. Accordingly, the combined Digital Wave system was submitted to

phone service providers such as Southwestern Bell for evaluation.

33. Throughout this time period GLOBAL COM continued to develop the Single Wire technology. Additional patent applications were filed regarding these developments.

34. In the latter part of 1997 and early 1998 GLOBAL COM personnel worked with DirecTV engineers to complete an operational system using the Single Wire technology.

35. HCI and Foxcom had access to GLOBAL COM's technology via its prior association with GLOBAL COM. In 1998, Foxcom entered into a contract with California Amplifier, Inc. to produce the "stacked" LNB and down converter hardware for the Single Wire system. Although this was done without GLOBAL COMM's knowledge, the result was that the "stacked" LNB technology became well known in the industry.

36. Around this same time period, PrimeStar, Foxcom and WSNet (successor to HCI) installed a functioning system – using GLOBAL COM's patented technology – in a 300-unit MDU in the Chicago area. A second large MDU using the same technology was installed in the San Francisco area.

37. In the fall of 1998, Hughes Network Systems (an affiliate of DirecTV) tested an integrated MDU solution including GLOBAL COM's Digital Wave system. As a result of the

success of these tests, Hughes showcased the system by feeding live signals to multiple demo receivers showing DirecTV and DirecPC services at the 1998 SBCA show in Nashville, Tennessee.

38. In August of 1999, GLOBAL COM's Digital Wave product was selected as a *Private Cable & Wireless Cable* magazine's top 20 reader's choice award winner.

39. By this time the original DirecTV brand was owned by DirecTV, Inc. (hereinafter "DirecTV"), a subsidiary of Hughes Electronics Corp. DirecTV increased its market share by purchasing other companies. One of the biggest purchases was its acquisition of Primestar.

40. All satellite service providers seek to provide more channels to the customers. Adding more channels generally requires adding more satellites. As a result of its acquisitions and internal development, DirecTV had at least three satellites providing service.

41. Each satellite must be parked in its own orbit, and each must be offset somewhat from its neighbors. In order to use a single dish to receive signals from multiple satellites, multiple feed horns are provided on a single dish. The feed horns are angularly offset on the dish so that each is pointed (using a reflection off the dish surface itself) toward a different satellite. This arrangement exacerbated the existing

problem of transferring the received data from the dish to the receiver.

42. GLOBAL COM's single wire technology also provided a solution to the problem of feeding signals from more than one satellite through a single wire from a single dish.

43. In 1998 and 1999 DirecTV used GLOBAL COM's Single Wire technology. DirecTV described GLOBAL COM's Digital Wave system as a very useful and reliable product.

44. DirecTV and its competitors offer satellite broadcast services to subscribing customers. Each of those require the installation of equipment that contains parts and technology covered by GLOBAL COM's Patents at the subscriber's location ("the infringing equipment").

45. Most of this infringing equipment is acquired from one of four Master System Operators ("MSO's") who are the Defendants in this case.

46. Each DirecTV customer utilizes hardware that is developed and/or procured by at least one of the Defendant Master System Operators ("MSO's"). Key components of this hardware infringe on GLOBAL COM'S Patents.

47. The MSO's provide the equipment according to specifications provided by DirecTV, and the installers are hired to place the equipment in a subscriber's home.

48. The overarching DirecTV specifications allow the satellite reception hardware to be obtained from any of the Defendants. The hardware all conforms to the specifications which DirecTV establishes, and it is therefore all compatible with the DirecTV network.

49. By the early 2000's, GLOBAL COM had obtained four U.S. patents covering the Single Wire technology (with other patents still pending). In this period, GLOBAL COM became aware that some of DirecTV's products used the Single Wire technology.

50. Although some of DirecTV's uses were authorized, GLOBAL COM had not authorized the use of its Single Wire technology for the "stacked LNB" dishes required for the reception of signals from multiple satellites. The hardware was made by others, as approved and directed by DirecTV.

51. In 2003 DirecTV selected a design known as the "DirecTV multi-satellite dish antenna." This design was manufactured by KTI Antenna Division, a subsidiary of California Amplifier, Inc. The design used a triple-head LNB capable of receiving multiple satellites. In order for multiple users to have full channel capacity, the design required that some of the satellite signal be block converted to different frequency blocks.

52. GLOBAL COM acquired a functioning KTI dish made according to the 2003 DirecTV specifications and analyzed it. GLOBAL COM determined that the KTI dish design included block conversion of different satellite frequencies – as described and claimed in GLOBAL COM's patents.

53. GLOBAL COM raised its concerns with DirecTV and some of its MSO's but no resolution was reached.

54. In March of 2004, GLOBAL COM filed a complaint for patent infringement against DirecTV. This complaint was filed in the Northern District of Florida.

55. The GLOBAL COM patent infringement claim against DirecTV was ultimately settled by a written agreement between DirecTV and GLOBAL COM.

56. GLOBAL COM and DirecTV ultimately entered a license agreement covering the patents for the Single Wire technology. That license agreement covered the period from the settlement of the 2004 patent infringement claim up through December 31, 2007. The license agreement covered the MSO's for the same period. Thus, the MSO's use of GLOBAL COM's patented technology was licensed up through the end of 2007.

57. GLOBAL COM sought to obtain a renewal of the license agreement with DirecTV. The license agreement expired on December 31, 2007 and was not renewed. Since that time, the

MSO's have not been authorized to use GLOBAL COM's Single Wire technology.

THE DEFENDANTS' ROLE

58. Each of the defendants in this case is a Master System Operator ("MSO") of the DirecTV system. Each MSO sells hardware to be installed for the use of subscribers of the DirecTV system. Each Defendant MSO also offers engineering support services to the technicians who actually install the equipment.

59. The Defendant MSO's also contract with independent companies who perform the installation and maintenance of the hardware used to receive the DirecTV broadcasts. They perform technical training and marketing work as well.

THE SINGLE WIRE PATENTS

60. Several patent applications were filed covering the Single Wire technology (hereinafter "Single Wire Patents"). Most of these applications have now been issued as U.S. Patents (one remains pending). The following table presents the relevant information as to the eight issued Single Wire Patents:

Patent No.	Filing Date	Issue Date	Appl. No.	Reference Name
5,805,975	4/9/1997	9/8/1998	838,677	'975 Patent
6,122,482	12/31/1997	9/19/2000	09/001,484	'482 Patent
6,334,045	7/21/2000	12/25/2001	09/621,464	'045 Patent
6,397,038	9/18/2000	9/18/2000	09/664,443	'038 Patent

6,917,783	12/17/2001	7/12/2005	10/016,119	'783 Patent
6,947,702	1/23/2002	9/20/2005; Reissue 5/3/2011	10/052,344; Reissue 95/000,293	'702 Patent
7,542,717	3/24/2005	6/2/2009	11/089,131	'717 Patent
7,826,791	12/10/2008	10/2/2010	12/314,439	'791 Patent

61. GLOBAL COM is the owner by assignment of all the Single Wire Patents.

62. GLOBAL COM has previously sought to license its Single Wire Patents to the Defendants in this case, but no agreement has been reached. Following the expiration of the 2007 license agreement between GLOBAL COM and DirecTV, the Defendants' continued promotion, sale and use of satellite systems incorporating the Single Wire Patents has been without the consent of GLOBAL COM.

63. All conditions precedent have been performed, satisfied or waived.

COUNT I – PATENT INFRINGMENT (AS TO PDI)

64. All allegations prior to Count I are realleged and incorporated herein.

65. Defendant PDI is infringing and has infringed and contributed to and induced infringement of the '975, '482, '045, '038, '783, '702, '717, and '791 Patents under one or more provisions of 35 U.S.C. §§271 (a)-(g).

66. PDI is aware and has been aware of the existence of the Single Wire Patents. PDI's infringement of the Single Wire Patents has been and continues to be willful and deliberate.

67. PDI's infringement of the Single Wire Patents has caused and is causing irreparable harm to GLOBAL COM. GLOBAL COM is entitled to damages in an amount to be determined at trial as a result of PDI's infringement, to entry of an injunction against further infringement by PDI, and to trebling of damages.

COUNT II – PATENT INFRINGEMENT (AS TO NORTH AMERICAN)

68. All allegations prior to Count I are realleged and incorporated herein.

69. Defendant NORTH AMERICAN is infringing and has infringed and contributed to and induced infringement of the '975, '482, '045, '038, '783, '702, '717, and '791 Patents under one or more provisions of 35 U.S.C. §§271 (a)-(g).

70. NORTH AMERICAN is aware and has been aware of the existence of the Single Wire Patents. NORTH AMERICAN's infringement of the Single Wire Patents has been and continues to be willful and deliberate.

71. NORTH AMERICAN's infringement of the Single Wire Patents has caused and is causing irreparable harm to GLOBAL COM. GLOBAL COM is entitled to damages in an amount to be

determined at trial as a result of NORTH AMERICAN's infringement, to entry of an injunction against further infringement by NORTH AMERICAN, and to trebling of damages.

COUNT III – PATENT INFRINGEMENT (AS TO PERFECT 10)

72. All allegations prior to Count I are realleged and incorporated herein.

73. Defendant PERFECT 10 is infringing and has infringed and contributed to and induced infringement of the '975, '482, '045, '038, '783, '702, '717, and '791 Patents under one or more provisions of 35 U.S.C. §§271 (a)-(g).

74. PERFECT 10 is aware and has been aware of the existence of the Single Wire Patents. PERFECT 10's infringement of the Single Wire Patents has been and continues to be willful and deliberate.

75. PERFECT 10's infringement of the Single Wire Patents has caused and is causing irreparable harm to GLOBAL COM. GLOBAL COM is entitled to damages in an amount to be determined at trial as a result of PERFECT 10's infringement, to entry of an injunction against further infringement by PERFECT, and to trebling of damages.

COUNT IV – PATENT INFRINGEMENT (AS TO DSI)

76. All allegations prior to Count I are realleged and incorporated herein.

77. Defendant DSI is infringing and has infringed and contributed to and induced infringement of the ‘975, ‘482, ‘045, ‘038, ‘783, ‘702, ‘717, and ‘791 Patents under one or more provisions of 35 U.S.C. §§271 (a)-(g).

78. DSI is aware and has been aware of the existence of the Single Wire Patents. DSI’s infringement of the Single Wire Patents has been and continues to be willful and deliberate.

79. DSI’s infringement of the Single Wire Patents has caused and is causing irreparable harm to GLOBAL COM. GLOBAL COM is entitled to damages in an amount to be determined at trial as a result of DSI’s infringement, to entry of an injunction against further infringement by DSI, and to trebling of damages.

PRAYER FOR RELIEF –ALL COUNTS

WHEREFORE, GLOBAL COM prays for relief against the Defendants and request that the Court enter judgment against each of the Defendants and in favor of GLOBAL COM as follows:

A. That the Court hold that each Defendant has infringed the ‘975, ‘482, ‘045, ‘038, ‘783, ‘702, ‘717, and ‘791 Patents;

B. That the Court enter a permanent injunction against further infringement of the ‘975, ‘482, ‘045, ‘038, ‘783, ‘702, ‘717, and ‘791 Patents by each Defendant

as well as its officers, subsidiaries, employees, and affiliates;

C. That the Court order each Defendant to pay compensatory damages to GLOBAL COM pursuant to 35 U.S.C. §284;

D. That the Court find each Defendant guilty of willful infringement of the '975, '482, '045, '038, '783, '702, '717, and '791 Patents and enter an order trebling damages pursuant to 35 U.S.C. §285;

E. That the Court deem this an exceptional case and award GLOBAL COM reasonable attorney fees and costs pursuant to 35 U.S.C. §285; and

F. Such other relief as the Court deems just and proper.

JURY TRIAL

GLOBAL COM hereby requests a trial by jury pursuant to Fed.R.Civ.P. 38(b) on all issues so triable.

Dated: October 21, 2011

_/s/ John Wiley Horton_____
J. Wiley Horton, Esq.
wiley@penningtonlaw.com
PENNINGTON, MOORE, WILKINSON,
BELL & DUNBAR, P.A.
215 S. Monroe Street, 2nd Floor
Tallahassee, FL 32301
850 222-3533 – office
850 222-2126 – fax
Co-Counsel for Plaintiff

AND

Guy M. Burns, Esq.
guyb@jpfirm.com
JOHNSON, POPE, BOKOR,
RUPPEL & BURNS, LLP
403 E. Madison Street, Suite 400
Tampa, FL 33602
813 225-2500 – office
183 223-7118 – fax
Co-Counsel for Plaintiff

AND

Michael J. Brickman, Esq.
mbrickman@rpwb.com
James C. Bradley, Esq.
Nina H. Fields, Esq.
RICHARDSON, PATRICK,
WESTBROOK & BRICKMAN
174 East Bay Street
Charleston, SC 29401
843 727-6520 – office
850 222-2126 – fax
Co-Counsel for Plaintiff

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