

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

MASSACHUSETTS INSTITUTE OF  
TECHNOLOGY,

Plaintiff,

vs.

FUNAI ELECTRIC COMPANY, LTD.,  
FUNAI CORPORATION, INC.,  
FUNAI SERVICE CORPORATION and  
P&F USA, INC.,

Defendants.

Civil Action No. \_\_\_\_\_

**COMPLAINT FOR PATENT INFRINGEMENT AND JURY DEMAND**

Plaintiff Massachusetts Institute of Technology (“MIT”), by and through its undersigned attorneys, hereby pleads the following claims for patent infringement against Defendants Funai Electric Company, Ltd. (“Funai Japan”), Funai Corporation, Inc. (“Funai USA”), Funai Service Corporation (“Funai Service”), and P&F USA, Inc. (“P&F USA”) (collectively, “Defendants”) and alleges as follows:

**PARTIES**

1. Plaintiff Massachusetts Institute of Technology is a co-educational, privately endowed university located at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139. MIT is the assignee and owns all right, title, and interest to U.S. Patent Nos. 5,187,575 (“the ’575 patent”), 5,218,435 (“the ’435 patent”), 5,444,491 (“the ’491 patent”), and 5,485,210 (“the ’210 patent”) (collectively, the “Asserted Patents”).

2. MIT is a preeminent research university, dedicated to the advancement of knowledge and education of students in science, technology, and other areas of scholarship. MIT has consistently received high marks from organizations such as *U.S. News & World*

*Report*. Its School of Engineering's graduate program, for example, has been consistently ranked No. 1 in the United States by *U.S. News & World Report*. For more than twenty years, MIT has also consistently held top spot in the magazine's undergraduate engineering rankings.

3. MIT is well-known for its cutting edge research and a longstanding commitment to bring creative solutions to the world's most pressing challenges. MIT receives on average more than \$1 billion in sponsored research, leading to hundreds of inventions every year. MIT owns over 3,500 issued U.S. patents. Each year, MIT's innovations contribute billions of dollars and hundreds of thousands of jobs to the economy.

4. Among the inventions MIT has created are those related to digital televisions described in and claimed by the Asserted Patents, which are licensed by numerous manufacturers of television products. These inventions and others resulted, in part, from MIT's pioneering research and development in digital television technology and related digital processing systems and methods, including its involvement in Digital HDTV Grand Alliance ("the Grand Alliance") and its contributions to the technologies that later became part of the ATSC Standards that now govern the digital terrestrial television broadcasts in the United States.

5. MIT has been involved in digital television and related research since at least the 1980's. In the early 1990's, the Federal Communications Commission ("FCC") established Advisory Committee on Advanced Television Service ("the Advisory Committee") to assist it in gathering and understanding information on future technologies that would enable the United States to transition from analog television to a new digital television standard. After evaluating scores of submissions for the new digital TV standards, the Advisory Committee chose four finalists for further evaluation. MIT was one of the finalists.

6. The finalists then formed the Grand Alliance in 1993 to expedite the development of standard advanced television technologies. The collaboration resulted in a unified proposal that successfully combined the best features of the finalists' digital approaches to high definition television, resulting in a system that distinguished itself during laboratory and field tests. The Advanced Television Systems Committee ("ATSC") adopted and included in its proposed ATSC Standards specifications from the Grand Alliance's system.

7. In November 1995, the Advisory Committee issued its final report, recommending the adoption of the ATSC Standards for digital terrestrial television broadcasts in the United States. In December 1996, the FCC adopted the major elements of the ATSC Standards, and mandated its use for digital television broadcasting in the United States. The adopted standards include fundamental technologies that had been developed by MIT in years prior.

8. During the process of selecting new digital broadcasting standards, MIT not only made instrumental technical contributions, but also made significant impact on the evaluation process for those standards. MIT's contributions to the new digital broadcasting standard earned it an R&D 100 Award in 1998 and an Emmy in 1997, together with its fellow members of the Grand Alliance.

9. MIT has made significant investment to develop the new digital television and related signal processing technology. As part of the research and development effort, MIT has accumulated a portfolio of valuable patents on technologies related to digital televisions and digital signal processing, including the Asserted Patents. These patents have been made available for license and are indeed licensed by numerous licensees at fair and reasonable rates.

10. To protect its intellectual property rights and the interest of its licensees, MIT has also offered Defendants a license. Defendants have thus far refused to respect MIT's intellectual property rights, including the rights in the Asserted Patents.

11. MIT is informed and believes, and thereon alleges, that Defendant Funai Japan is a corporation organized and existing under the laws of Japan, having a principal place of business at 7-7-1 Nakagaito, Daito City, Osaka 574-0013, Japan. MIT is further informed and believes, and thereon alleges, that Funai Japan, directly or indirectly through affiliates, subsidiaries or other entities it owns and/or controls, makes, imports into the United States, distributes, sells, offers to sell and/or services throughout the United States, including in this judicial district, audiovisual products that practice at least one claim of the Asserted Patents sold under brand names such as Philips, Magnavox, Sylvania, Emerson, Funai, and Symphonic that Defendants own or license as well as products under the brand names such as Denon that it is contracted to manufacture. Hereinafter, the above-mentioned audiovisual products sold, imported, marketed, offered for sale, and/or serviced by Defendants are referred to as "Accused Products." Said Accused Products include, but are not limited to, (i) digital televisions ("DTVs"), DTV/DVD player combinations, DTV/VCR combinations, and DTV/Blu-ray disc player combinations that comply with the ATSC, MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (ii) Blu-ray disc players that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (iii) DVD players that comply with the MPEG-2 standards and infringe at least one claim of the Asserted Patents, (iv) home theater and audio systems that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (v) DVR systems (including systems containing a DVR component) that comply with the ATSC and/or MPEG-2

standards and infringe at least one claim of the Asserted Patents, (vi) DVD/VCR player combinations or DVR/VCR player combinations that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, and (vii) Blu-ray/DVD player combinations, Blu-ray/DVR player combinations that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents. Said Accused Products provided by Defendants are sold and/or offered for sale at retail stores in the District of Massachusetts such as Wal-Mart, Target and Best Buy, in online stores such as [www.amazon.com](http://www.amazon.com), [store.philips.com](http://store.philips.com), [www.walmart.com](http://www.walmart.com), [www.target.com](http://www.target.com), [www.bestbuy.com](http://www.bestbuy.com), and thus are available for purchase and consumption in the District of Massachusetts. Furthermore, MIT is informed and believes, and thereon alleges, that certain said Accused Products are also sold, offered to sell and/or otherwise distributed through Funai's hospitality TV business unit to hotels and hospitals in the District of Massachusetts. Funai Japan has voluntarily and purposely placed these products into the stream of commerce with the expectation that they will be offered for sale and sold in the Commonwealth of Massachusetts and in this judicial district.

12. MIT is informed and believes, and thereon alleges, that Defendant Funai USA is a corporation organized and existing under the laws of New Jersey, having a principal place of business at 201 Route 17 North, Rutherford, New Jersey. Funai USA is a wholly-owned sales subsidiary of Funai Japan, and conducts business throughout the United States, including in the District of Massachusetts. MIT is informed and believes, and thereon alleges, that Funai USA, directly or indirectly through affiliates, subsidiaries or other entities it owns and/or controls, imports into the United States, distributes, sells, and/or offers to sell throughout the United States, including in this judicial district, Accused Products sold under brand names such as

Magnavox, Sylvania, Emerson, Funai, and Symphonic that Defendants own or license. Said Accused Products sold, marketed, imported, offered for sale, or distributed by Funai USA include, but are not limited to, (i) DTVs, DTV/DVD player combinations, DTV/VCR combinations, and DTV/Blu-ray disc player combinations that comply with the ATSC, MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (ii) Blu-ray disc players that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (iii) DVD players that comply with the MPEG-2 standards and infringe at least one claim of the Asserted Patents, (iv) home theater and audio systems that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (v) DVR systems (including systems containing a DVR component) that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, (vi) DVD/VCR player combinations or DVR/VCR player combinations that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, and (vii) Blu-ray/DVD player combinations, Blu-ray/DVR player combinations that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents. Said Accused Products provided by Defendants are sold and/or offered for sale at retail stores in the District of Massachusetts such as Wal-Mart, in online stores such as [www.amazon.com](http://www.amazon.com), [www.walmart.com](http://www.walmart.com), and thus are available for purchase and consumption in the District of Massachusetts. Funai USA has voluntarily and purposely placed these products into the stream of commerce with the expectation that they will be offered for sale and sold in the Commonwealth of Massachusetts and in this judicial district.

13. MIT is informed and believes, and thereon alleges, that Defendant Funai Service is a corporation organized and existing under the laws of Ohio with its principal place of

business at 2200 Spiegel Drive, Groveport, Ohio 43125. MIT is informed and believes, and thereon alleges, that Funai Service is a wholly-owned service subsidiary of Funai Japan, and conducts business throughout the United States, including in this judicial district. MIT is also informed and believes, and thereon alleges, that Funai Service, directly or indirectly through affiliates, subsidiaries or other entities it owns and/or controls, provides customer support and repair services, among other things, to Defendants' customers throughout the United States, including in the Commonwealth of Massachusetts, for Funai's Accused Products sold, imported, marketed or distributed by Defendants under the brand names such as Philips, Magnavox, Sylvania, Emerson, Symphonic and others. Said Accused Products serviced by Defendant Funai Service include, but are not limited to (i) DTVs, DTV/DVD player combinations, DTV/VCR combinations, and DTV/Blu-ray disc player combinations that comply with the ATSC, MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (ii) Blu-ray disc players that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (iii) DVD players that comply with the MPEG-2 standards and infringe at least one claim of the Asserted Patents, (iv) home theater and audio systems that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (v) DVR systems (including systems containing a DVR component) that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, (vi) DVD/VCR player combinations or DVR/VCR player combinations that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, and (vii) Blu-ray/DVD player combinations, Blu-ray/DVR player combinations that comply with the MPEG2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents. Said Accused Products provided by Defendants are sold and/or offered for sale at retail stores in

the District of Massachusetts such as Target and Best Buy, in online stores such as [www.amazon.com](http://www.amazon.com), [store.philips.com](http://store.philips.com), [www.walmart.com](http://www.walmart.com), [www.target.com](http://www.target.com), [www.bestbuy.com](http://www.bestbuy.com), and thus are available for purchase and consumption in the District of Massachusetts. Funai Service has voluntarily and purposely provided services to support the sale or offer of sale of these products with the expectation that they will be offered for sale and sold in the Commonwealth of Massachusetts and in this judicial district.

14. MIT is informed and believes, and thereon alleges, that Defendant P&F USA is a corporation organized and existing under the laws of Georgia with its principal place of business at 305 Windward Plaza, Windward Fairways II, Suite 100, Alpharetta, Georgia. MIT is further informed and believes, and thereon alleges, that P&F USA is a wholly-owned sales subsidiary of Funai Japan, and is the exclusive brand-name licensee of Philips consumer televisions (including Blu-ray players, DVD players/recorders, and VCR players) and home theaters and Philips Hospitality in North America. MIT is also informed and believes, and thereon alleges, that P&F USA conducts business throughout the United States, including in this judicial district. MIT is also informed and believes, and thereon alleges, that P&F USA, directly or indirectly through affiliates, subsidiaries or other entities it owns and/or controls, imports into the United States, distributes, sells, and/or offers to sell throughout the United States, including in the District of Massachusetts, Accused Products sold under the brand name Philips. Said Philips-brand Accused Products imported, sold, marketed, offered for sale, and/or distributed by Defendant P&F USA include, but are not limited to (i) DTVs, DTV/DVD player combinations, DTV/VCR combinations, and DTV/Blu-ray disc player combinations that comply with the ATSC, MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (ii) Blu-ray disc players that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one

claim of the Asserted Patents, (iii) DVD players that comply with the MPEG-2 standards and infringe at least one claim of the Asserted Patents, (iv) home theater and audio systems that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents, (v) DVR systems (including systems containing a DVR component) that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, (vi) DVD/VCR player combinations or DVR/VCR player combinations that comply with the ATSC and/or MPEG-2 standards and infringe at least one claim of the Asserted Patents, and (vii) Blu-ray/DVD player combinations, Blu-ray/DVR player combinations that comply with the MPEG-2 and/or MPEG-4 standards and infringe at least one claim of the Asserted Patents.

These Philips-brand Accused Products provided by Defendants are sold and/or offered for sale at retail stores in the District of Massachusetts such as Target and Best Buy, in online stores such as [www.amazon.com](http://www.amazon.com), [store.philips.com](http://store.philips.com), [www.walmart.com](http://www.walmart.com), [www.target.com](http://www.target.com), [www.bestbuy.com](http://www.bestbuy.com), and thus are available for purchase and consumption in the District of Massachusetts.

Furthermore, MIT is informed and believes, and thereon alleges, that certain said Philips-brand Accused Products provided by Defendants are also sold, offered to sell and/or otherwise distributed through Funai's hospitality TV business unit to hotels and hospitals in the District of Massachusetts. P&F USA has voluntarily and purposely placed these products into the stream of commerce with the expectation that they will be offered for sale and sold in the Commonwealth of Massachusetts and in this judicial district.

### **JURISDICTION AND VENUE**

15. This is an action for patent infringement arising under the patent laws of the United States of America, Title 35 of the United States Code. This Court has subject matter

jurisdiction over the matters pleaded herein under 28 U.S.C. §§ 1331 and 1338(a) in that this is a civil action arising out of the patent laws of the United States of America.

16. As detailed in paragraphs 11 through 14, above, Defendants regularly and deliberately engaged in and continue to engage in activities that result in the sales, offers for sale, and/or services of infringing products and processes in the Commonwealth of Massachusetts and in this judicial district. These activities violate the United States patent rights MIT has under the Asserted Patents. This Court has personal jurisdiction over Defendants because, among other things, Defendants conduct business in the Commonwealth of Massachusetts and in this judicial district.

17. Venue is proper in the District of Massachusetts pursuant to 28 U.S.C. §§ 1391(b), (c) and (d), and 1400(b).

**COUNT I**  
**(Infringement of U.S. Patent No. 5,187,575)**

18. MIT incorporates by reference paragraphs 1 through 17 of this Complaint as if set forth fully herein.

19. The '575 patent, entitled "Source Adaptive Television System," was duly issued on February 16, 1993. A true and correct copy of the '575 patent is attached as Exhibit A hereto.

20. Until its recent expiration, the '575 patent had been in full force and effect since its issuance. MIT owns by assignment the entire right, title, and interest in and to the '575 patent, including the right to sue for past infringements thereof.

21. MIT is informed and believes, and thereon alleges, that at least the Accused Products provided by Defendants which can decode a signal compliant with the ATSC standards ("Accused ATSC Products") infringed one or more claims of the '575 patent. These products include, but are not limited to, Emerson-brand DTVs, model numbers LC407EM1, LC401EM2,

LC401EM2F, CLC401EM2F, LC370EM2, LC320EM2, LC320EM2F, CLC320EM2F, LC320EM1F, LC320EM, LC260EM2, LC260EM1, LC220EM2, LC220EM1, LC190EM2, and LC190EM1; Emerson-brand TV/DVD player combinations, model numbers LD195EMX, LD190EM2, LD190EM1, and LD190EM; Magnavox-brand DTVs, model numbers 46MF401B, 40MF401B, 37MF301B, 37MF301B, 32MF330B, 26MF301B, 22ME360B, 22ME601B, 19MF301B, 19ME601B, 46MF440B, 40MF430B, 32MF330B, 26MF330B, 22MF330B, and 19MF330B; Magnavox-brand DTV/DVD player combinations, model numbers 37MD359B, 37MD350B, 37MD311B, 32MD359B, 32MD350B, 32MD301B, 32MD311B, 26MD350B, 26MD301B, 26MD311B, 22MD311B, 19MD359B, 19MD350B, 19MD301B, and 19MD311B; Magnavox DTV/Blu-ray combination, model number 42MD459B; Philips-brand DTVs, model numbers 55PFL7705D, 55PFL7505D, 55PFL5706/F7, 52PFL7704D, 52PFL5704D, 47PFL7704D, 47PFL5704D, 46PFL5706/F7, 42PFL7704D, 42PFL6704D, 42PFL5704D, 742PFL5603D, 40PFL5706/F7, 40PFL5505D, 32PFL4907/F7, 26PFL4907/F7, 22PFL4907/F7, 40PFL4707/F7, 55PFL4706/F7, 46PFL4706/F7, 40PFL4706/F7, 32PFL4507/F7, 26PFL4507/F7, 22PFL4507/F7, 22PLF4505D/F7, 19PLF4505D/F7, 50PFL3807/F7, 50PFL3707/F7, 46PFL3706/F7, 40PFL3706/F7, 32PFL3506/F7, 46PFL3505D/F7, 40PFL3505D/F7, 22PFL3505D/F7 and 19PFL3505D/F7; Philips-brand professional displays, model numbers 46HFL3683S/F7, 40HFL3683S/F7, 32HFL3683S/F7, 26HFL5662H/F7, 22HFL5662H/F7, 32HFL5662L/F7, 32HFL5662D/F7, 37HFL5682L/F7, 37HFL5682D/F7, 42HFL5682D/F7, and 42HFL5682L/F7; Sylvania DTVs, model numbers LC407SS1, LC401SS2(or 1), LC320SS2(or 1), LC320SL1, LC260SS2(or 1), LC220SS2(or 1), LC220SL1, LC190SS2(or 1) and LC190SL1; Sylvania-brand DTV/Blu-ray combination, model number

LD427SSX, and Sylvania-brand DTV/DVD player combinations, model numbers LD370SSX, LD320SSX, LD320SS2(or 1), LD195SSX, and LD190SS2(or 1).

22. MIT is informed and believes, and thereon alleges, that Defendants were aware of MIT's pioneering patents (including the '575 patent) on fundamental signal processing technologies, which had been utilized, among other things, in audiovisual systems and devices similar to said Accused ATSC Products. MIT further alleges that Defendants had actual notice of the '575 patent.

23. MIT is informed and believes, and thereon alleges, that Defendants directly infringed one or more claims of the '575 patent, in violation of 35 U.S.C. § 271(a), by, among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license from MIT, said Accused ATSC Products falling within the scope of one or more claims of the '575 patent.

24. MIT is informed and believes, and thereon alleges, that Defendants induced the infringement of at least one claim of the '575 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively, knowingly and/or recklessly aiding and abetting others (including Defendants' customers and end users) through activities such as marketing said Accused ATSC Products, creating and/or distributing data sheets, application notes, and/or similar materials with instructions on using said Accused ATSC Products, with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the United States, without license or authority, said Accused ATSC Products that fell within the scope of at least one claim of the '575 patent.

25. On information and belief, Defendants contributed to the infringement of at least one claim of the '575 patent, in violation of 35 U.S.C. § 271(c), by, among other things, making,

using, offering to sell, selling, and/or importing into the United States, without authority or license, said Accused ATSC Products which embodied a material part of the claimed inventions of the '575 patent, knowing that such products and/or components were specially made or specially adapted for use in an infringement of these claims, and that they were not staple articles or commodities of commerce suitable for substantial non-infringing use.

26. As a result of the infringement of the '575 patent by each Defendant, MIT has been damaged by Defendants' conduct. MIT is therefore entitled for such damages pursuant to 35 U.S.C. § 284 in an amount that presently cannot be ascertained, but that will be determined at trial.

27. MIT is informed and believes, and thereon alleges, that Defendants' past infringement was deliberate and willful, and that this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to MIT pursuant to 35 U.S.C. § 285.

**COUNT II**  
**(Infringement of U.S. Patent No. 5,218,435)**

28. MIT incorporates by reference paragraphs 1 through 17 of this Complaint as if set forth fully herein.

29. The '435 patent, entitled "Digital Advanced Television Systems," was duly issued on June 8, 1993. A true and correct copy of the '435 patent is attached as Exhibit B hereto.

30. Until its recent expiration, the '435 patent had been in full force and effect since its issuance. MIT owns by assignment the entire right, title, and interest in and to the '435 patent, including the right to sue for past infringements thereof.

31. MIT is informed and believes, and thereon alleges, that at least the Accused Products provided by Defendants that are capable of decoding signals compliant with ATSC, MPEG-2 and/or MPEG-4 standards ("Accused ATSC/MPEG Products") infringed one or more

claims of the '435 patent. These products include, but are not limited to, Emerson-brand DTVs, model numbers LC407EM1, LC401EM2, LC401EM2F, CLC401EM2F, LC370EM2, LC320EM2, LC320EM2F, CLC320EM2F, LC320EM1F, LC320EM, LC260EM2, LC260EM1, LC220EM2, LC220EM1, LC190EM2, and LC190EM1; Emerson-brand TV/DVD player combinations, model numbers LD19EMX, LD190EM2, LD190EM1 and LD19EM; Funai-brand portable Blu-ray disc players, model number PB750FX1; Magnavox-brand Blu-ray disc players, model numbers MBP5220F, MBP5120, MBP5210F, MBP5130, MBP1100, NB500MG1F, MBP110V, and NB500MG; Magnavox-brand DTVs, model numbers 46MF401B, 40MF401B, 37MF301B, 37MF301B, 32MF330B, 26MF301B, 22ME360B, 22ME601B, 19MF301B, 19ME601B, 46MF440B, 40MF430B, 32MF330B, 26MF330B, 22MF330B, and 19MF330B; Magnavox-brand DTV/DVD player combinations, model numbers 37MD359B, 37MD350B, 37MD311B, 32MD359B, 32MD350B, 32MD301B, 32MD311B, 26MD350B, 26MD301B, 26MD311B, 22MD311B, 19MD301B, 19MD311B, 19MD359B and 19MD350B; Magnavox-brand DVD players/recorders, model numbers MDR515H, MDR513H, DV225MG9, MDV3110, MDV3000, MDV2100 and ZC320MWBB; Magnavox-brand DVD/VCR Recorder, model numbers ZC320MW8B, CDV220MW9, and ZV457MG9; Magnavox-brand home theater systems, model numbers MRD723B and MRD410B; Philips-brand Blu-ray disc players, model numbers BDP3306/F7, BDP5506/F7, BDP5406/F7, BDP7520/F7, BDP7320/F7, BDP5320/F7, BDP5110/F7, BDP5012/F7, BDP3406/F7, and BDP2900/F7; Philips-brand DTVs, model number 55PFL7705D, 55PFL7505D, 55PFL5706/F7, 52PFL7704D, 52PFL5704D, 47PFL7704D, 47PFL5704D, 46PFL5706/F7, 42PFL7704D, 42PFL6704D, 42PFL5704D, 742PFL5603D, 40PFL5706/F7, 40PFL5505D, 32PFL4907/F7, 26PFL4907/F7, 22PFL4907/F7, 40PFL4707/F7, 55PFL4706/F7, 46PFL4706/F7, 40PFL4706/F7, 32PFL4507/F7,

26PFL4507/F7, 22PFL4507/F7, 22PLF4505D/F7, 19PLF4505D/F7, 50PFL3807/F7, 50PFL3707/F7, 46PFL3706/F7, 40PFL3706/F7, 32PFL3506/F7, 46PFL3505D/F7, 40PFL3505D/F7, 22PFL3505D/F7 and 19PFL3505D/F7; Philips-brand professional displays, model numbers 46HFL3683S/F7, 40HFL3683S/F7, 32HFL3683S/F7, 26HFL5662H/F7, 22HFL5662H/F7, 32HFL5662L/F7, 32HFL5662D/F7, 37HFL5682L/F7, 37HFL5682D/F7, 42HFL5682D/F7, and 42HFL5682L/F7; Philips-brand home theater systems, model numbers HTS5580W/F7, HTS3051BV/F7, HTS3531/F7, HTS5506/F7, HTS3306/F7 and HTS3106/F7; Philips-brand DVD players, model numbers DVP3560/F7, DVP3680/F7, DVP3620/F7, and DVP3570/F7; Philips-brand portable Blu-ray disc players, model numbers PB9011/37 and PB9001/37; Philips-brand DVD-VCR recorders, model number DVP3345VB/F7; Philips-brand portable TVs, model number PT902/37; Philips-brand DVD-VCR recorders, model number DVP3345VB/F7; Philip-brand portable DVD player, model numbers PD9016/37, PD9000/37, PET741W/17, PD9030/37, PD9012/37, PD703/37, PD7012/37, PD700/37, PET741B/37, and PET749/37; Sylvania DTVs, model numbers LC407SS1, LC401SS2(or 1), LC320SS2(or 1), LC320SL1, LC260SS2(or 1), LC220SS2(or 1), LC220SL1, LC190SS2(or 1) and LC190SL1; Sylvania Blu-ray players, model number NB500SL8; Sylvania-brand DVD players, model numbers DV225SL8 and DP170SL8; Sylvania DVD recorders, model numbers ZC350SL8 and ZC320SL8; Sylvania DVD/VCR combinations, model numbers ZV450SL8 and ZV420SL8; Sylvania-brand DTV/Blu-ray combination, model number LD427SSX; Sylvania-brand DTV/DVD player combinations, model numbers LD370SSX, LD320SSX, LD320SS2(or 1), LD195SSX, and LD190SS2(or 1); Sylvania-brand Blu-ray disc players, model numbers NB620SL1, NBS530SLX, NBS531SLX and NB500SL3; Symphonic DVD/VCR combinations,

model numbers CSDV840, CSDV840E, and SR90VE; and Symphonic DVD player SD200E and WF104.

32. MIT is informed and believes, and thereon alleges, that Defendants were aware of MIT's pioneering patents (including the '435 patent) on fundamental signal processing technologies, which had been utilized, among other things, in audiovisual systems and devices similar to said Accused ATSC/MPEG Products. MIT further alleges that Defendants had actual notice of the '435 patent.

33. MIT is informed and believes, and on thereon alleges, that Defendants directly infringed at least one claim of the '435 patent, in violation of 35 U.S.C. § 271(a), by, among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license from MIT, said Accused ATSC/MPEG Products falling within the scope of at least one claim of the '435 patent.

34. MIT is informed and believes, and thereon alleges, that Defendants induced the infringement of at least one claim of the '435 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively, knowingly and/or recklessly aiding and abetting others (including Defendants' customers and end users) through activities such as marketing said Accused ATSC/MPEG Products, creating and/or distributing data sheets, application notes, and/or similar materials with instructions on using said Accused ATSC/MPEG Products, with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the United States, without license or authority, said Accused ATSC/MPEG Products that fell within the scope of at least one claim of the '435 patent.

35. MIT is informed and believes, and thereon alleges, that Defendants contributed to the infringement of at least one claim of the '435 patent, in violation of 35 U.S.C. § 271(c), by,

among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license, said Accused ATSC/MPEG Products which embodied a material part of the claimed inventions of the '435 patent, knowing that such products and/or components were specially made or specially adapted for use in an infringement of these claims, and that they were not staple articles or commodities of commerce suitable for substantial non-infringing use.

36. As a result of the infringement of the '435 Patent by each Defendant, MIT has been damaged by Defendants' conduct. MIT is therefore entitled for such damages pursuant to 35 U.S.C. § 284 in an amount that presently cannot be ascertained, but that will be determined at trial.

37. MIT is informed and believes, and thereon alleges, that Defendants' past infringement was deliberate and willful, and that this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to MIT pursuant to 35 U.S.C. § 285.

**COUNT III**  
**(Infringement of U.S. Patent No. 5,444,491)**

38. MIT incorporates by reference paragraphs 1 through 17 of this Complaint as if set forth fully herein.

39. The '491 patent, entitled "Television System with Multiple Transmission Formats," was duly issued on August 22, 1995. A true and correct copy of the '491 patent is attached as Exhibit C hereto.

40. The '491 patent has been in full force and effect since its issuance. MIT owns by assignment the entire right, title, and interest in and to the '491 patent, including the right to sue for past, present, and future infringements thereof.

41. MIT is informed and believes, and thereon alleges, that at least the Accused ATSC Products (as defined in paragraph 21) provided by Defendants, which are capable of receiving television signals or storing and reading television signals to and from a storage media, infringe one or more claims of the '491 patent. MIT is further informed and believes, and thereon alleges, that Defendants are aware of MIT's pioneering patents (including the '491 patent) on fundamental signal processing technologies, which have been utilized, among other things, in audiovisual systems and devices similar to said Accused ATSC Products. MIT further alleges that Defendants had actual notice of the '491 patent.

42. MIT is informed and believes, and thereon alleges, that Defendants directly infringed and continue to directly infringe one or more claims of the '491 patent, in violation of 35 U.S.C. § 271(a), by, among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license from MIT, said Accused ATSC Products falling within the scope of one or more claims of the '491 patent.

43. MIT is informed and believes, and thereon alleges, that Defendants induced and continue to induce the infringement of one or more claims of the '491 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively, knowingly and/or recklessly aiding and abetting others (including Defendants' customers and end users) through activities such as marketing said Accused ATSC Products, creating and/or distributing data sheets, application notes, and/or similar materials with instructions on using said Accused ATSC Products, with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the United States, without license or authority, said Accused ATSC Products falling within the scope of one or more claims of the '491 patent.

44. MIT is informed and believes, and thereon alleges, that Defendants contributed to and continue to contribute to the infringement of one or more claims of the '491 patent, in violation of 35 U.S.C. § 271(c), by, among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license, said Accused ATSC Products which embody a material part of the claimed inventions of the '491 patent, knowing that such products and/or components are specially made or specially adapted for use in an infringement of these claims, and that they are not staple articles or commodities of commerce suitable for substantial non-infringing use.

45. As a result of the infringement of the '491 Patent by each Defendant, MIT has been damaged, and will continue to be damaged by Defendants' conduct. MIT is therefore entitled for such damages pursuant to 35 U.S.C. § 284 in an amount that presently cannot be ascertained, but that will be determined at trial.

46. MIT is informed and believes, and thereon alleges, that Defendants' past and continuing infringement has been deliberate and willful, and that this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to MIT pursuant to 35 U.S.C. § 285.

**COUNT IV**  
**(Infringement of U.S. Patent No. 5,485,210)**

47. MIT incorporates by reference paragraphs 1 through 17 of this Complaint as if set forth fully herein.

48. The '210 patent, entitled "Digital Advanced Television Systems," was duly issued on January 16, 1996. A true and correct copy of the '210 patent is attached as Exhibit D hereto.

49. The '210 patent had been in full force and effect since its issuance, until its recent expiration. MIT owns by assignment the entire right, title, and interest in and to the '210 patent, including the right to sue for past infringements thereof.

50. MIT is informed and believes, and thereon alleges, that at least the Accused ATSC/MPEG Products (as defined in paragraph 31) provided by Defendants infringed one or more claims of the '210 patent. MIT is further informed and believes, and thereon alleges, that Defendants were aware of MIT's pioneering patents (including the '210 patent) on fundamental signal processing technologies, which had been utilized, among other things, in audiovisual systems and devices similar to the Accused ATSC/MPEG Products. MIT further alleges that Defendants had actual notice of the '210 patent.

51. MIT is informed and believes, and thereon alleges, that Defendants directly infringed at least one claim of the '210 patent, in violation of 35 U.S.C. § 271(a), by, among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license from MIT, said Accused ATSC/MPEG Products falling within the scope of at least one claim of the '210 patent.

52. MIT is informed and believes, and thereon alleges, that Defendants induced the infringement of at least one claim of the '210 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively, knowingly and/or recklessly aiding and abetting others (including Defendants' customers and end users) through activities such as marketing said Accused ATSC/MPEG Products, creating and/or distributing data sheets, application notes, and/or similar materials with instructions on using said Accused ATSC/MPEG Products, with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the United

States, without license or authority, said Accused ATSC/MPEG Products that fell within the scope of at least one claim of the '210 patent.

53. MIT is informed and believes, and thereon alleges, that Defendants contributed to the infringement of at least one claim of the '210 patent, in violation of 35 U.S.C. § 271(c), by, among other things, making, using, offering to sell, selling, and/or importing into the United States, without authority or license, said Accused ATSC/MPEG Products which embodied a material part of the claimed inventions of the '210 patent, knowing that such products and/or components were specially made or specially adapted for use in an infringement of these claims, and that they were not staple articles or commodities of commerce suitable for substantial non-infringing use.

54. As a result of the infringement of the '210 Patent by each Defendant, MIT has been damaged by Defendants' conduct. MIT is therefore entitled for such damages pursuant to 35 U.S.C. § 284 in an amount that presently cannot be ascertained, but that will be determined at trial.

55. MIT is informed and believes, and thereon alleges, that Defendants' past infringement was deliberate and willful, and that this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to MIT pursuant to 35 U.S.C. § 285.

#### **PRAYER FOR RELIEF**

WHEREFORE, MIT prays for entry of judgment against each Defendant as follows:

- A. That each Defendant has directly infringed each of the Asserted Patents under 35 U.S.C. § 271(a);
- B. That each Defendant has induced the infringement by others of each of the Asserted Patents under 35 U.S.C. § 271(b);

- C. That each Defendant has contributed to the infringement by others of each of the Asserted Patents under 35 U.S.C. § 271(c);
- D. That each Defendant provide to MIT an accounting of all gains, profits and advantages derived by each Defendant's direct or indirect infringement of the Asserted Patents, and that MIT be awarded damages adequate to compensate them for the wrongful infringement by each Defendant, in accordance with 35 U.S.C. § 284;
- E. That the damages awarded to MIT with respect to each of the Asserted Patents be increased up to three times, in view of Defendants' willful infringement, in accordance with 35 U.S.C. § 284;
- F. That this case be declared an exceptional one in favor of MIT under 35 U.S. C. § 285, and that MIT be awarded its reasonable attorneys' fees and other expenses incurred in connection with this action in accordance with 35 U.S.C. § 285 and Rule 54(d) of the Federal Rules of Civil Procedure;
- G. That MIT be awarded its interest and costs of suit incurred in this action;
- H. That MIT be awarded any other supplemental damages and interest on all damages; and
- I. That MIT be awarded such other and further relief as this Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Federal Rule of Civil Procedure 38(b), MIT hereby demands a trial by jury on all issues triable to a jury.

**MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY**

By its attorneys,

/s/ Thomas F. Maffei

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