

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, DC**

**Before the Honorable MaryJoan McNamara  
Administrative Law Judge**

**In the Matter of**

**CERTAIN DIGITAL VIDEO RECEIVERS,  
BROADBAND GATEWAYS, AND RELATED  
HARDWARE AND SOFTWARE  
COMPONENTS**

**Investigation No. 337-TA-1158**

**COMCAST RESPONDENTS' NOTICE OF PRIOR ART**

Pursuant to Order No. 5, Respondents Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; and Comcast Holdings Corporation (collectively “Comcast” or “Respondents”), pursuant to 19 C.F.R. § 210.32(a)(1), hereby submit their Notice of Prior Art (“Notice”) for the patents-in-suit, i.e., United States Patent Nos. 8,001,564 (“the ‘564 patent”), 7,779,445 (“the ‘445 patent”), 7,386,871 (“the ‘871 patent”), 8,156,528 (“the ‘528 patent”), 7,301,900 (“the ‘900 patent”), and 7,200,855 (“the ‘855 patent”) (collectively, “the Asserted Patents”). Comcast’s Notice is attached as Exhibit 1.

In addition to the references identified in Exhibit 1, Comcast may rely upon, and hereby incorporates into the Notice, prior art (1) referenced in the patents-in-suit, their prosecution histories, or the patents or publications cited in the Notice; (2) identified or produced by any party or the Commission Investigative Staff in this Investigation, including prior art identified in Comcast’s Response to the Complaint or Comcast’s interrogatory responses; (3) included in any party’s hearing exhibit list; or (4) cited in any expert report served in this Investigation. In Appendix 1, Comcast identifies the references cited during prosecution of the Asserted Patents that Comcast may rely on in addition to the references identified below.

Rovi EX2011  
Comcast v. Rovi  
IPR2020-00787

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
“Digital Video Broadcasting (DVB); Interaction Channel for Satellite Master Antenna TV (SMATV) Distribution Systems; Guidelines for Versions Based on Satellite and Coaxial Sections,” TR 101 201 V.1.1.1 (1997-10)		1997	European Telecommunications Standards Institute
“HPNA 2.0 10 Mbps Home Phoneline Networking,” NCTA Technical Papers (2000)		2000	Edward H. Frank, Jack Holloway
Haykin, Communication Systems (1994)		1994	Simon Haykin
Haykin, Communication Systems (2000)		2000	Simon Haykin
“Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications,” ANSI/IEEE 802.11, 1999 Edition		1999	The Institute of Electrical and Electronics Engineers, Inc.
“Part 3: Carrier Sense Multiple Access With Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications,” IEEE Std 802.3, 2000 Edition		2000	The Institute of Electrical and Electronics Engineers, Inc.
Japanese Patent Application Publication No. 2000-049726	JP	Feb. 18, 2000	Shoji Shiimoto, Mamoru Kukumiya
Japanese Patent Application Publication No. 2000502857	JP	Mar. 7, 2000	Anthony John Wasilewski, Douglas F. Woodhead, Gary Lee Logston

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
Japanese Patent Application Publication No. 2000505253	JP	Apr. 25, 2000	Leo W. Hoarty
Japanese Patent Application Publication No. 2001128138	JP	May 11, 2001	Masayuki Ishizaki
Japanese Patent Application Publication No. 200136892	JP	Dec. 9, 2001	Jinno Yoshiyuki, Sakai Toshio
Japanese Patent Application Publication No. H07-322236	JP	Dec. 8, 1995	Kuniaki Utsumi, Hiroyuki Sasai, Hiroaki Yamamoto, Manabu Tanabe, Katsuyuki Fujito
Japanese Patent Application Publication No. H08172606	JP	July 2, 1996	Makoto Ikushima, Hitoshi Akiyama, Takashi Takeuchi, Toshiyuki Oda, Hiroaki Takahashi, Yasuhiro Sato
Japanese Patent Application Publication No. H09-219852	JP	Aug. 19, 1997	Rei Yoshitake
Japanese Patent Application Publication No. H0950673	JP	Feb. 18, 1997	Yasushi Fujinami
Japanese Patent Application Publication No. H0955919	JP	Feb. 25, 1997	Yoshitaka Takasaki
Japanese Patent Application Publication No. H09-98164	JP	Apr. 8, 1997	Mutsunari Miyakoshi
Japanese Patent Application Publication No. H11-205352	JP	July 30, 1999	Ichita Nakamura, Takeshi Ota
Japanese Patent Application Publication No. H11-340936	JP	Dec. 10, 1999	Shoji Shiimoto, Mamoru Kukumiya
Japanese Patent Application Publication No. H11-340938	JP	Dec. 10, 1999	Shoji Shiimoto, Mamoru Kukumiya

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
Japanese Patent Application Publication No. H1188768	JP	Mar. 30, 1999	Jim C. Williams
“HomeRF: Wireless Networking for the Connected Home,” IEEE Personal Communications (2000)		2000	Kevin J. Negus, Adrian P. Stephens, Jim Lansford
“Television Home Server for Digital HDTV Broadcasting,” Institute of Image Information and Television Engineers (VIR98-45)		1998	Tatsuya Kurioka, Hiroki Minami, Toshiyuki Fujisawa, Takashi Kato, Haruo Okuda, Junji Numazawa
“Study for the Applications Synchronizing Multi-Audio-Visual Files Through Very High-Speed Networks,” (2001)		2001	Nakahira
U.S. Patent Application Publication No. 2001/0012338	US	Aug. 9, 2001	Edward H. Frank, John T. Holloway
U.S. Patent Application Publication No. 2001/0024474	US	Sept. 27, 2001	Sein Shlomo Rakib, Yehuda Azenkot
U.S. Patent Application Publication No. 2002/0057893	US	May 16, 2002	Anthony Wood, Spencer Shanson, Matthew Self, Donald Woodward, Jr., Doug Shannon, Mark Nudelman, Karl Townsend
U.S. Patent No. 3,668,307	US	June 6, 1972	William W. Face, Harold W. Katz, Murray H. Miller
U.S. Patent No. 4,538,174	US	Aug. 27, 1985	Eric J. Gargini, Henry L. Baker

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
U.S. Patent No. 5,121,390	US	June 9, 1995	Joseph K. Farrell, Jeffrey S. Gordon, Robert V. Jenness, Daniel C. Kuhl, Timothy F. Lee, Tony E. Parker
U.S. Patent No. 5,124,985	US	June 23, 1992	Toshiya Hoshikawa
U.S. Patent No. 5,502,497	US	Mar. 26, 1996	Kimiya Yamaashi, Masayuki Tani, Koichiro Tanikoshi, Matsayasu Futakawa, Shinya Tanifuji, Atsushi Kawabata, Norito Watanabe, Kazunari Maeda
U.S. Patent No. 5,530,806	US	June 25, 1996	Joseph H. Condon, Bart N. Locanthi
U.S. Patent No. 5,677,905	US	Oct. 14, 1997	John A. Bigham, Bill Goodman, Kamran Sistanizadeh, Regina Lightfoot, Edward C. Mihm, Ulric E. Arthur, Bahman Amin-Salehi, Greg Brenner, Douglas Clark
U.S. Patent No. 5,708,961	US	Jan. 13, 1998	Denny L. Hylton, Robert D. Farris, Stephen J. Flaherty, Richard G. Backus, Faye M. Smith, John Andrew Herbei, Raymond Ian Millet, Nolan Marcus Forness, Charles H. Stier
U.S. Patent No. 5,717,878	US	Feb. 10, 1998	Christian Sannino
U.S. Patent No. 5,729,281	US	Mar. 17, 1998	Kuniaki Utsumi, Hiroyuki Sasai, Hiroaki Yamamoto, Manabu Tanabe, Katsuyuki Fujito
U.S. Patent No. 5,832,287	US	Nov. 3, 1998	Martin M. Atalla
U.S. Patent No. 5,870,474	US	Feb. 9, 1999	Anthony John Wasilewski, Douglas F. Woodhead, Gary Lee Logston

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
U.S. Patent No. 5,883,661	US	Mar. 16, 1999	W. Leo Hoarty
U.S. Patent No. 5,933,192	US	Aug. 3, 1999	Jeffrey W. Crosby, Michael A. Friedman
U.S. Patent No. 5,970,386	US	Oct. 19, 1999	Jim C. Williams
U.S. Patent No. 5,991,308	US	Nov. 23, 1999	Amir Michael Fuhrmann, Selim Shlomo Rakib, Yehuda Azenkot
U.S. Patent No. 6,026,150	US	Feb. 15, 2000	Edward H. Frank, Jack Holloway
U.S. Patent No. 6,115,080	US	Sept. 5, 2000	Glenn Arthur Reitmeier
U.S. Patent No. 6,134,419	US	Oct. 17, 2000	Jim C. Williams
U.S. Patent No. 6,160,989	US	Dec. 12, 2000	John S. Hendricks, Alfred E. Bonner
U.S. Patent No. 6,177,931	US	Jan. 23, 2001	Ronald Alexander, Stephen Dias, Kenneth S. Hancock, Elsie Y. Leung, Douglas Macrae, Arthur Y. Ng, Shawn O'Neil, Peter Christopher Schoaff, Jonathan Sutton, Thomas Edward Ward, III, Thomas Westberg, Henry C. Yuen
U.S. Patent No. 6,324,338	US	Nov. 27, 2001	Anthony Wood, Donald Woodward, Jr.
U.S. Patent No. 6,434,153	US	Aug. 13, 2002	Takeki Yazaki, Takeshi Aimoto
U.S. Patent No. 6,493,873	US	Dec. 10, 2002	Jim C. Williams
U.S. Patent No. 6,584,153	US	June 24, 2003	Donald F. Gordon, Sadik Bayrakeri, Joseph R. Wild, Jeremy S. Edmonds, Edward A. Ludvig, John P. Comito, Eugene Gershtein

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
U.S. Patent No. 6,816,891	US	Nov. 9, 2004	Uresh K. Vahalia, Uday Gupta, Betti Porat, Percy Tzelnic
U.S. Patent No. 6,889,385	US	May 3, 2005	Selin Shlomo Rakib, Fabrice Michel Raymond Quinard, Peter Albert Monta
U.S. Patent No. 6,891,841	US	May 10, 2005	Ryan M. Leatherburty, Robert E. Johnson, Jason A. Beens
U.S. Patent No. 6,934,300	US	Aug. 23, 2005	Stephen Robert Tomassetti, Donald C. Snedigar, Thomas Gerald Wojciechowski
U.S. Patent No. 6,954,448	US	Oct. 11, 2005	Kevin L. Farley, James A. Proctor, Jr.
U.S. Patent No. 6,961,314	US	Nov. 1, 2005	Thomas J. Quigley, Jonathan S. Min, Lisa V. Denney, Henry Samueli, Sean F. Nazareth, Feng Chen, Fang Lu, Christopher R. Jones
U.S. Patent No. 6,970,470	US	Nov. 29, 2005	Takeki Yazaki, Takeshi Aimoto
U.S. Patent No. 7,239,650	US	July 3, 2007	Selim Shlomo Rakib, Yehuda Azenkot
U.S. Patent No. 7,463,635	US	Dec. 9, 2008	Takeki Yazaki, Takeshi Aimoto
U.S. Patent No. 7,607,148	US	Oct. 20, 2009	Brian Feinberg, Eugene Gershtein, Donald F. Gordon, Yong Ho Son, Sadik Bayrakeri
U.S. Patent No. 7,667,780	US	Feb. 23, 2010	S. Merrill Weiss
U.S. Patent No. 7,861,272	US	Dev. 28, 2010	Samuel H. Russ, David B. Lett, Jonathan A. Robinson, Michael A. Gaul
U.S. Patent No. 7,903,667	US	Mar. 8, 2011	Takeki Yazaki, Takeshi Aimoto

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
U.S. Patent No. 7,933,295	US	Apr. 26, 2011	James C. Thi, Theodore F. Rabenko, David Hartman, Robert M. Lukas, Kenneth J. Unger, Ramin Borazjani, Shane P. Lansing, Robert J. Lee, Todd L. Brooks, Kevin L. Miller
U.S. Patent No. 7,974,714	US	July 5, 2011	Steven Mark Hoffberg
U.S. Patent No. 8,442,110	US	May 14, 2013	Lena Y. Pavlovskaja, Robert Johnson, Airan Landau, Amos Kohn
U.S. Patent No. 8,601,519	US	Dec. 3, 2013	John Alson Hicks, III, Randy Scott Zimler
U.S. Patent No. 4,352,183	US	Sept. 28, 1982	Christopher K. Davis, Richard F. Mitchell
U.S. Patent No. 4,357,700	US	Nov. 2, 1982	Joseph A. Alvarez, Bruce D. Gobioff, Lynn P. West
U.S. Patent No. 4,587,514	US	May 6, 1986	Marc L. Schas, Steven C. Taylor
U.S. Patent No. 4,602,367	US	July 2, 1986	Thomas C. McDermott
U.S. Patent No. 4,641,307	US	Feb. 3, 1987	Brian M. Russell
U.S. Patent No. 5,276,866	US	Jan. 4, 1994	Michael Paolini
U.S. Patent No. 5,329,370	US	July 12, 1994	Lauren F. Yazolino, Ming S. Leung
U.S. Patent No. 5,418,559	US	May 23, 1995	Donald E. Blahut
U.S. Patent No. 5,425,101	US	June 3, 1995	Arthur S. Woo, Wayne S. Sheldrick, Gary W. Chan
U.S. Patent No. 5,497,508	US	Mar. 5, 1996	David L. George
U.S. Patent No. 5,515,106	US	May 7, 1996	John H. Chaney, Kevin E. Bridgewater



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U.S. Patent No. 5,524,111	US	June 4, 1996	Jean-Francois Le Penec, Patrick Michel, Patrick Sicsic, Joseph Spatari
U.S. Patent No. 5,543,861	US	Aug. 6, 1996	Vincent C. Harradine, Howard J. Teece, Michael J. Ludgate, Rajan Bhandari, Gavin A. Walker
U.S. Patent No. 5,546,193	US	Aug. 13, 1996	James E. Hailey, Foy E. Wilkey, Randall D. Staggs
U.S. Patent No. 5,579,325	US	Nov. 26, 1996	Reinhard Lipfert, Kai Garweg
U.S. Patent No. 5,579,483	US	Nov. 26, 1996	Shunji Imai
U.S. Patent No. 5,585,866	US	Dec. 17, 1996	Larry Miller, Edward B. Knudson, Bruce Davis, Paul Darata
U.S. Patent No. 5,623,480	US	Apr. 22, 1997	Paul R. Hartmann, Thomas L. Engdahl, Kevin Cadieux, Kevin Pope
U.S. Patent No. 5,648,958	US	July 15, 1997	Raymond C. Counterman
U.S. Patent No. 5,661,526	US	Aug. 26, 1997	Kenji Hamamoto, Kazuhiro Nagura, Takamichi Yoshida, Tomoyuki Hanai
U.S. Patent No. 5,671,226	US	Sept. 23, 1997	Tokumichi Murakami, Kazuhiro Matsuzaki, Yoshiaki Kato, Hideo Ohira
U.S. Patent No. 5,699,359	US	Dec. 16, 1007	Takaaki Suga
U.S. Patent No. 5,729,280	US	Mar. 17, 1998	Hajime Inoue, Yukio Kubota, Toshimichi Nagashima, Akira Shimazu, Keiji Kanota
U.S. Patent No. 5,761,439	US	June 2, 1998	Rabindra P. Kar, Kenneth W. Reese
U.S. Patent No. 5,778,316	US	July 7, 1998	Bengt Persson, Joseph Eric Turcotte

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U.S. Patent No. 5,818,825	US	Oct. 6, 1998	Richard Corrigan, Bruce D. Mueller, Timothy M. Burke
U.S. Patent No. 5,822,324	US	Oct. 13, 1998	Bruce Kostresti, Allan Schneider
U.S. Patent No. 5,850,610	US	Dec. 15, 1998	Alan John Testani, Eugene Arnold Eighmy, William Thomas Edwards
U.S. Patent No. 5,867,205	US	Feb. 2, 1999	Edward R. Harrison
U.S. Patent No. 5,878,222	US	Mar. 2, 1999	Edward R. Harrison
U.S. Patent No. 5,933,192	US	Aug. 3, 1999	Jeffrey W. Crosby, Michael A. Friedman
U.S. Patent No. 5,966,384	US	Oct. 12, 1999	Kenneth A. Felix, Joseph Rinchiuso
U.S. Patent No. 5,982,411	US	Nov. 9, 1999	Mark K. Eyer, Robert Rast
U.S. Patent No. 5,982,459	US	Nov. 9, 1999	Jan Frandrianto, Bryan R. Martin, Doug G. Neubauer, Duat H. Tran, Matthew D. Cressa, Arijanto Soemedi
U.S. Patent No. 5,990,881	US	Nov. 23, 1999	Hajime Inoue, Yukio Kubota, Toshimichi Nagashima, Akira Shimazu, Keiji Kanota
U.S. Patent No. 6,009,099	US	Dec. 28, 1999	Stephen Lewis, K. Martin Stevenson, III, Farzad S. Nabavi
U.S. Patent No. 6,023,731	US	Feb. 8, 2000	Rajeev Chawla
U.S. Patent No. 6,058,108	US	May 2, 2000	Alex Krister Raith, Francois Sawyer, Ray Henry
U.S. Patent No. 6,084,643	US	July 4, 2000	Yuriko Kishtaka, Tetsuya Kohno, Naoki Kigawa, Toshiro Ozawa, Mika Ito, Kazuhiro Akaike

<b>PRIOR ART</b>	<b>ISSUING COUNTRY</b>	<b>DATE</b>	<b>INVENTOR(S)/ AUTHOR(S)</b>
U.S. Patent No. 6,108,695	US	Aug. 22, 2000	Rajeev Chawla
U.S. Patent No. 6,118,498	US	Sept. 12, 2000	Glenn Arthur Reitmeier
U.S. Patent No. 6,122,514	US	Sept. 19, 2000	Charles W. Spaur, Patrick J. Kennedy, Michael F. Braitberg, Kenneth J. Klingenstein
U.S. Patent No. 6,141,329	US	Oct. 31, 2000	R. Brough Turner
U.S. Patent No. 6,204,843	US	Mar. 20, 2001	Michael J. Freeman, Gregory W. Harper
U.S. Patent No. 6,889,385	US	May 3, 2005	Selin Shlomo Rakib, Fabrice Michel Raymond Quinard, Peter Albert Monta
U.S. Patent No. 7,016,377	US	Mar. 21, 2006	Kyung-Joon Chun, Nak-Koo Kim
European Patent No. 1126608	EU	Aug. 20, 2008	Paul V. Darbee, Menno F. Buys
U.S. Patent No. 5,737,028	US	Apr. 7, 1998	Randall Lee Bertram, Herbert S. Steelman
U.S. Patent No. 6,177,931	US	Jan. 23, 2001	Ronald Alexander, Stephen Dias, Kenneth S. Hancock, Elsie Y. Leung, Douglas Macrae, Arthur Y. Ng, Shawn O'Neil, Peter Christopher Schoaff, Jonathan Sutton, Thomas Edward, III, Thomas Westberg, Henry C. Yuen
U.S. Patent No. 6,874,152	US	Mar. 29, 2005	Brian Christopher Vermeire, Jim Sasso, Lewis Andrew Kurfist