

Annex A4 to the DVD-R Recorder and DVD-RW Recorder Patent License Agreement

Essential Pioneer Patents relevant to DVD-RW/-R Recorder / DVD-RW Video part

COUNTRY	REFERENCE	FILING NR	FILING DATE	PUBLICATION NR	GRANT NR	EXPIRY DATE	TITLE	
AU	560229AU01	2001294203	09-okt-2001	WO02/31819	2001294203	09-okt-2021	Adapted recording data type	
BE-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	01325499	09-okt-2021	Adapted recording data type	
BR	513047BR01	PI9701610-1	02-apr-1997		PI9701610-1	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
CA	513047CA01	2201454	01-apr-1997		2201454	01-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
CA	560229CA01	2423554	09-okt-2001	WO02/31819	2423554	09-okt-2021	Adapted recording data type	
CN	504102CN02	200610093817.3	20-jun-2006		ZL200610093817.3	05-dec-2016	Digital data transmitting	
CN	504102CN03	200610093831.3	20-jun-2006		ZL200610093831.3	05-dec-2016	Digital data transmitting	
CN	504102CN04	200610093830.9	20-jun-2006		ZL200610093830.9	05-dec-2016	Digital data transmitting	
CN	504166CN03	200610100302.1	30-jun-2006		ZL200610100302.1	28-feb-2017	Highlight information	
CN	504167CN02	02127535.1	27-jul-2002	1595516	ZL02127535.1	15-mrt-2017	2 types of VOBUs	
CN	504179CN01	97113064.7	04-apr-1997	1185620	ZL97113064.7	04-apr-2017	Highlight PTS	
CN	504179CN02	03110466.5	08-apr-2003	1515995	ZL03110466.5	04-apr-2017	Highlight PTS	
CN	504179CN03	200410054417.2	15-jul-2004	1567469	ZL200410054417.2	04-apr-2017	Highlight PTS	
CN	504184CN01	97111653.9	19-mrt-1997	CN1175055A	ZL97111653.9	19-mrt-2017	Attribute information	
CN	504184CN02	02127109.7	23-jul-2002	1567456	ZL02127109.7	19-mrt-2017	Attribute information	
CN	504184CN03	200410033137.3	15-jul-2004	1560859	ZL200410033137.3	19-mrt-2017	Attribute information	
CN	513047CN01	97104993.9	02-apr-1997		ZL97104993.9	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
CN	513047CN02	200510128892.4	30-nov-2005		ZL200510128892.4	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
CN	533117CN01	00101699.7	28-jan-2000	1264109	ZL00101699.7	28-jan-2020	Navigation Data Structure	
CN	533118CN02	200410003394.2	13-feb-2004	1555058	ZL200410003394.2	31-jan-2020	Navigation Data Structure	
CN	533119CN01	00101167.7	26-jan-2000	1262506	ZL00101167.7	26-jan-2020	Navigation Data Structure	
CN	540055CN01	00126355.2	11-sep-2000	1288232	ZL00126355.2	11-sep-2020	Format operation	
CN	560229CN01	01819082.0	09-okt-2001	1639788	ZL01819082.0	09-okt-2021	Adapted recording data type	
DE	503032DE01	19625662.3	26-jun-1996	19625662	19625662	26-jun-2016	Border Zone	
DE-EP	503028EP01	96110320.7	26-jun-1996	0751506	69615291	26-jun-2016	Layout of Land Pre-Pit	
DE-EP	503111EP01	97300118.3	09-jan-1997		69715265	09-jan-2017	Layout of Land Pre-Pit	
DE-EP	503141EP01	97105420.0	01-apr-1997	0800172	69718839.6	01-apr-2017	Linking scheme	
DE-EP	503141EP02	02018115.2	13-aug-2002	1280152	69739772	01-apr-2017	Linking scheme	

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DE-EP	504030EP01	95305172.9	25-jul-1995	0694915	69525571.1	25-jul-2015	Multi layer disc	
DE-EP	504041EP01	96304936.6	04-jul-1996	0752705A2	69633365.1	04-jul-2016	Time map	
DE-EP	504046EP01	96304828.5	28-jun-1996		69625647.9	28-jun-2016	Cell elapse time information	
DE-EP	504055EP01	96110987.3	08-jul-1996	0753854	69633540.9	08-jul-2016	Seamless playback control	
DE-EP	504102EP02	03025667.1	07-nov-2003	1403869	69636916.8	05-dec-2016	Digital data transmitting	
DE-EP	504102EP04	06115016.5	06-jun-2006		69638178.8	05-dec-2016	Digital data transmitting	
DE-EP	504102EP05	06115021.5	06-jun-2006		69638200.8	05-dec-2016	Digital data transmitting	
DE-EP	504163EP01	97302312.0	03-apr-1997	1280153	69719582.1	03-apr-2017	Stream availabilty	
DE-EP	504163EP02	02021306.2	20-sep-2002		69740287.8	03-apr-2017	Stream availabilty	
DE-EP	504163EP03	02021307.0	20-sep-2002	1267348	69740268.1	03-apr-2017	User operation restriction	
DE-EP	504164EP01	97301572.0	10-mrt-1997		69718225.8	10-mrt-2017	Access restriction control	
DE-EP	504165EP01	97301817.9	18-mrt-1997		69716154.4	18-mrt-2017	Still picture playback control	
DE-EP	504166EP01	97301340.2	27-feb-1997		69740026.3	27-feb-2017	Separation of PCI and DSI	
DE-EP	504167EP01	97301536.5	07-mrt-1997		69725365.1	07-mrt-2017	2 types of VOBUs	
DE-EP	504175EP01	97301858.3	19-mrt-1997		69715495.5	19-mrt-2017	Text information	
DE-EP	504175EP02	02009368.8	06-mei-2002	1229539	69739488.3	19-mrt-2017	Text information	
DE-EP	504176EP01	97301756.9	17-mrt-1997		69708181.8	17-mrt-2017	Time search map	
DE-EP	504179EP01	97302258.5	02-apr-1997		69734222.0	02-apr-2017	Highlight PTS	
DE-EP	504181EP01	97302338.5	04-apr-1997	1310957	69722701.4	04-apr-2017	Audio frame alignment	
DE-EP	504181EP02	03001306.4	23-jan-2003	1310957	69739676.2	04-apr-2017	Audio frame alignment	
DE-EP	504182EP01	97301490.5	05-mrt-1997		69715704.0	05-mrt-2017	Audio frame number	
DE-EP	504184EP01	97301757.7	17-mrt-1997		69718838.8	17-mrt-2017	Attribute information	
DE-EP	504184EP02	02021267.6	19-sep-2002	1274080	69740548.6	17-mrt-2017	Attribute information	
DE-EP	504186EP01	97301645.4	12-mrt-1997	0797203	69718539.7	12-mrt-2017	First access unit pointer	
DE-EP	504187EP01	97301820.3	18-mrt-1997		69723605.6	18-mrt-2017	24 bit data alignment	
DE-EP	504189EP01	97301489.7	05-mrt-1997	0795859	69704034.8	05-mrt-2017	Audio frame	
DE-EP	513047EP01	97105470.5	02-apr-1997	0800165	69737272.3	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
DE-EP	533117EP01	00101580.9	27-jan-2000	1024495	60047456.9	27-jan-2020	Navigation Data Structure	
DE-EP	533118EP01	00101515.5	26-jan-2000	1024494	60046357.5	26-jan-2020	Navigation Data Structure	

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DE-EP	533119EP01	00101514.8	26-jan-2000	1024492	60035302.8	26-jan-2020	Navigation Data Structure	
DE-EP	540055EP01	00307805.2	08-sep-2000		60043564.4	08-sep-2020	Format operation	
DE-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	60109630.4	09-okt-2021	Adapted recording data type	
EP	513047EP02	06125628.5	07-dec-2006				Layout of Land Pre-Pit	*grant for Pioneer's share
ES-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	01325499	09-okt-2021	Adapted recording data type	
FR-EP	503028EP01	96110320.7	26-jun-1996	0751506	00751506	26-jun-2016	Layout of Land Pre-Pit	
FR-EP	503111EP01	97300118.3	09-jan-1997		00784313	09-jan-2017	Layout of Land Pre-Pit	
FR-EP	503141EP01	97105420.0	01-apr-1997	0800172	00800172	01-apr-2017	Linking scheme	
FR-EP	503141EP02	02018115.2	13-aug-2002	1280152	01280152	01-apr-2017	Linking scheme	
FR-EP	504030EP01	95305172.9	25-jul-1995	0694915	00694915	25-jul-2015	Multi layer disc	
FR-EP	504041EP01	96304936.6	04-jul-1996	0752705A2	00752705	04-jul-2016	Time map	
FR-EP	504046EP01	96304828.5	28-jun-1996		00752703	28-jun-2016	Cell elapse time information	
FR-EP	504055EP01	96110987.3	08-jul-1996	0753854	00753854	08-jul-2016	Seamless playback control	
FR-EP	504102EP02	03025667.1	07-nov-2003	1403869	01403869	05-dec-2016	Digital data transmitting	
FR-EP	504102EP04	06115016.5	06-jun-2006		01715485	05-dec-2016	Digital data transmitting	
FR-EP	504102EP05	06115021.5	06-jun-2006		01715486	05-dec-2016	Digital data transmitting	
FR-EP	504163EP01	97302312.0	03-apr-1997	1280153	00800164	03-apr-2017	Stream availabilty	
FR-EP	504163EP02	02021306.2	20-sep-2002		01280153	03-apr-2017	Stream availabilty	
FR-EP	504163EP03	02021307.0	20-sep-2002	1267348	01267348	03-apr-2017	User operation restriction	
FR-EP	504164EP01	97301572.0	10-mrt-1997		00795869	10-mrt-2017	Access restriction control	
FR-EP	504165EP01	97301817.9	18-mrt-1997		00797201	18-mrt-2017	Still picture playback control	
FR-EP	504166EP01	97301340.2	27-feb-1997		00793232	27-feb-2017	Separation of PCI and DSI	
FR-EP	504167EP01	97301536.5	07-mrt-1997		00795871	07-mrt-2017	2 types of VOBUs	
FR-EP	504175EP01	97301858.3	19-mrt-1997		00798723	19-mrt-2017	Text information	
FR-EP	504175EP02	02009368.8	06-mei-2002	1229539	01229539	19-mrt-2017	Text information	
FR-EP	504179EP01	97302258.5	02-apr-1997		00800174	02-apr-2017	Highlight PTS	
FR-EP	504181EP01	97302338.5	04-apr-1997	1310957	00801392	04-apr-2017	Audio frame alignment	
FR-EP	504181EP02	03001306.4	23-jan-2003	1310957	01310957	04-apr-2017	Audio frame alignment	
FR-EP	504182EP01	97301490.5	05-mrt-1997		00795870	05-mrt-2017	Audio frame number	

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FR-EP	504184EP01	97301757.7	17-mrt-1997		00797205	17-mrt-2017	Attribute information	
FR-EP	504184EP02	02021267.6	19-sep-2002	1274080	01274080	17-mrt-2017	Attribute information	
FR-EP	504186EP01	97301645.4	12-mrt-1997	0797203	00797203	12-mrt-2017	First access unit pointer	
FR-EP	504187EP01	97301820.3	18-mrt-1997		00797199	18-mrt-2017	24 bit data alignment	
FR-EP	504189EP01	97301489.7	05-mrt-1997	0795859	00795859	05-mrt-2017	Audio frame	
FR-EP	513047EP01	97105470.5	02-apr-1997	0800165	00800165	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
FR-EP	533117EP01	00101580.9	27-jan-2000	1024495	1024495	27-jan-2020	Navigation Data Structure	
FR-EP	533118EP01	00101515.5	26-jan-2000	1024494	01024494	26-jan-2020	Navigation Data Structure	
FR-EP	533119EP01	00101514.8	26-jan-2000	1024492	01024492	26-jan-2020	Navigation Data Structure	
FR-EP	540055EP01	00307805.2	08-sep-2000		01083748	08-sep-2020	Format operation	
FR-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	01325499	09-okt-2021	Adapted recording data type	
GB-EP	503028EP01	96110320.7	26-jun-1996	0751506	00751506	26-jun-2016	Layout of Land Pre-Pit	
GB-EP	503111EP01	97300118.3	09-jan-1997		00784313	09-jan-2017	Layout of Land Pre-Pit	
GB-EP	503141EP01	97105420.0	01-apr-1997	0800172	00800172	01-apr-2017	Linking scheme	
GB-EP	503141EP02	02018115.2	13-aug-2002	1280152	01280152	01-apr-2017	Linking scheme	
GB-EP	504030EP01	95305172.9	25-jul-1995	0694915	00694915	25-jul-2015	Multi layer disc	
GB-EP	504041EP01	96304936.6	04-jul-1996	0752705A2	00752705	04-jul-2016	Time map	
GB-EP	504046EP01	96304828.5	28-jun-1996		00752703	28-jun-2016	Cell elapse time information	
GB-EP	504055EP01	96110987.3	08-jul-1996	0753854	00753854	08-jul-2016	Seamless playback control	
GB-EP	504102EP02	03025667.1	07-nov-2003	1403869	01403869	05-dec-2016	Digital data transmitting	
GB-EP	504102EP04	06115016.5	06-jun-2006		01715485	05-dec-2016	Digital data transmitting	
GB-EP	504102EP05	06115021.5	06-jun-2006		01715486	05-dec-2016	Digital data transmitting	
GB-EP	504163EP01	97302312.0	03-apr-1997	1280153	00800164	03-apr-2017	Stream availabilty	
GB-EP	504163EP02	02021306.2	20-sep-2002		01280153	03-apr-2017	Stream availabilty	
GB-EP	504163EP03	02021307.0	20-sep-2002	1267348	01267348	03-apr-2017	User operation restriction	
GB-EP	504164EP01	97301572.0	10-mrt-1997		00795869	10-mrt-2017	Access restriction control	
GB-EP	504165EP01	97301817.9	18-mrt-1997		00797201	18-mrt-2017	Still picture playback control	
GB-EP	504166EP01	97301340.2	27-feb-1997		00793232	27-feb-2017	Separation of PCI and DSI	
GB-EP	504167EP01	97301536.5	07-mrt-1997		00795871	07-mrt-2017	2 types of VOBUs	

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GB-EP	504175EP01	97301858.3	19-mrt-1997		00798723	19-mrt-2017	Text information
GB-EP	504175EP02	02009368.8	06-mei-2002	1229539	01229539	19-mrt-2017	Text information
GB-EP	504176EP01	97301756.9	17-mrt-1997		00797204	17-mrt-2017	Time search map
GB-EP	504179EP01	97302258.5	02-apr-1997		00800174	02-apr-2017	Highlight PTS
GB-EP	504181EP01	97302338.5	04-apr-1997	1310957	00801392	04-apr-2017	Audio frame alignment
GB-EP	504181EP02	03001306.4	23-jan-2003	1310957	01310957	04-apr-2017	Audio frame alignment
GB-EP	504182EP01	97301490.5	05-mrt-1997		00795870	05-mrt-2017	Audio frame number
GB-EP	504184EP01	97301757.7	17-mrt-1997		00797205	17-mrt-2017	Attribute information
GB-EP	504184EP02	02021267.6	19-sep-2002	1274080	01274080	17-mrt-2017	Attribute information
GB-EP	504186EP01	97301645.4	12-mrt-1997	0797203	00797203	12-mrt-2017	First access unit pointer
GB-EP	504187EP01	97301820.3	18-mrt-1997		00797199	18-mrt-2017	24 bit data alignment
GB-EP	504189EP01	97301489.7	05-mrt-1997	0795859	00795859	05-mrt-2017	Audio frame
GB-EP	513047EP01	97105470.5	02-apr-1997	0800165	00800165	02-apr-2017	Layout of Land Pre-Pit
GB-EP	533117EP01	00101580.9	27-jan-2000	1024495	1024495	27-jan-2020	Navigation Data Structure
GB-EP	533118EP01	00101515.5	26-jan-2000	1024494	01024494	26-jan-2020	Navigation Data Structure
GB-EP	533119EP01	00101514.8	26-jan-2000	1024492	01024492	26-jan-2020	Navigation Data Structure
GB-EP	540055EP01	00307805.2	08-sep-2000		01083748	08-sep-2020	Format operation
GB-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	01325499	09-okt-2021	Adapted recording data type
HK	503141HK01	03102149.3	25-mrt-2003		1050072	01-apr-2017	Linking scheme
HK	504102HK02	04106418.7	26-aug-2004		1063685	05-dec-2016	Digital data transmitting
HK	504165HK01	03100031.8	02-jan-2003	1048558	1048558	18-mrt-2017	Still picture playback control
HK	504167HK01	05107016.0	15-mrt-1997	1074907	1074907	15-mrt-2017	2 types of VOBUs
HK	504175HK01	03100507.3	21-jan-2003		1049402	19-mrt-2017	Text information
HK	504186HK01	03104540.4	24-jun-2003		1052402	18-mrt-2017	First access unit pointer
HK	533117HK01	00106569.8	17-okt-2000		1027430	28-jan-2020	Navigation Data Structure
HK	533118HK01	00106711.5	23-okt-2000		1027656	31-jan-2020	Navigation Data Structure
HK	533119HK01	00106712.4	23-okt-2000		1027657	26-jan-2020	Navigation Data Structure
HK	560229HK01	03107998.4	05-nov-2003	1055836	1055836	09-okt-2021	Adapted recording data type
ID	504102ID01	P-963596	05-dec-1996		0005541	05-dec-2016	Digital data transmitting

*grant for Pioneer's share

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ID	513047ID01	P-971080	31-mrt-1997		0012134	31-mrt-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
ID	513047ID02	P-00200300522	09-okt-2003		0015319	31-mrt-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
ID	560229ID01	W-00200300681	09-okt-2001	036.641	P0029048	09-okt-2021	Adapted recording data type	
IN	504102IN01	2183/MAS/1996	04-dec-1996		194873	04-dec-2016	Digital data transmitting	
IN	513047IN01	845/DEL/1997	01-apr-1997		216124	01-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
IN	513047IN02	2457/DEL/2004	10-dec-2004				Layout of Land Pre-Pit	*grant for Pioneer's share
IN	513047IN03	1858/DEL/2005	18-jul-2005		225392	01-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
IN	560229IN01	354/KOLNP/2003	09-okt-2001	WO02/31819	225436	09-okt-2021	Adapted recording data type	
IT-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	01325499	09-okt-2021	Adapted recording data type	
JP	503028JP02	2000339670	07-nov-2000	2001167447	03440071	26-jun-2015	Layout of Land Pre-Pit	
JP	503031JP03	2003084394	26-mrt-2003	2003288723	03847266	26-jun-2015	Optimum Power Control	
JP	503032JP03	2000378043	12-dec-2000	2001202718	03466565	26-jun-2015	Border Zone	
JP	503111JP01	1996004421	12-jan-1996	1997198657	03917207	12-jan-2016	Layout of Land Pre-Pit	
JP	503111JP04	2003043893	21-feb-2003	2003263744	03917535	12-jan-2016	Layout of Land Pre-Pit	
JP	503141JP01	1996079252	01-apr-1996	1997270171	03824701	01-apr-2016	Linking scheme	
JP	503141JP02	2003380360	10-nov-2003	2004047116	04012873	01-apr-2016	Linking scheme	
JP	503141JP03	2006262567	27-sep-2006	2007026667	04012929	01-apr-2016	Linking scheme	
JP	504030JP01	1995148907	15-jun-1995	1996096406	03558306	15-jun-2015	Multi layer disc	
JP	504041JP01	1995170913	06-jul-1995	1997023404	04018166	06-jul-2015	Time map	
JP	504046JP01	1995169103	04-jul-1995	1997023403	03701051	04-jul-2015	Cell elapse time information	
JP	504046JP02	2002180843	21-jun-2002	2003006985	04164295	04-jul-2015	Cell elapse time information	
JP	504050JP02	2004303303	18-okt-2004	2005093061	04170280	04-jul-2015	Audio channel contents information	
JP	504054JP01	1995177782	13-jul-1995	1997037199	03645006	13-jul-2015	Sub-picture contents inforamtion	
JP	504102JP01	1995316420	05-dec-1995	1997162857	03394127	05-dec-2015	Digital data transmitting	
JP	504163JP01	1996082932	04-apr-1996	1997274776	04059355	04-apr-2016	User operation restriction	
JP	504163JP02	2002322268	06-nov-2002	2003203433	04000047	04-apr-2016	Stream availability	
JP	504164JP03	2009068747	19-mrt-2009	2009199715	04551476	15-mrt-2016	Access restriction control	
JP	504165JP01	1996061471	18-mrt-1996	1997261584	03729920	18-mrt-2016	Still picture playback control	
JP	504165JP02	2002156155	29-mei-2002	2003046957	03730190	18-mrt-2016	Still picture playback control	

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JP	504165JP03	2002156156	29-mei-2002	2003068055	03730191	18-mrt-2016	Still picture playback control	
JP	504166JP02	2005166275	06-jun-2005	2005259351	03961001	28-feb-2016	Highlight information	
JP	504167JP01	1996059837	15-mrt-1996	1997252450	03824699	15-mrt-2016	2 types of VOBUs	
JP	504167JP02	2006135810	15-mei-2006	2006304326	04142063	15-mrt-2016	2 types of VOBUs	
JP	504168JP02	2006135819	15-mei-2006	2006269069	04343918	22-mrt-2016	VOBU search information	
JP	504170JP01	1996062324	19-mrt-1996	1997259527	03717585	19-mrt-2016	Video information recorded on a multilayer disc	
JP	504170JP03	2001371492	05-dec-2001	2002170339	03499854	19-mrt-2016	Video information recorded on a multilayer disc	
JP	504175JP01	1996068730	25-mrt-1996	1997265765	03698805	25-mrt-2016	Text information	
JP	504176JP01	1996061470	18-mrt-1996	1997251763	03761623	18-mrt-2016	Time search map	
JP	504177JP02	2002310532	25-okt-2002	2003187531	03519724	22-mrt-2016	Multichannel audio contents information	
JP	504178JP02	2002320640	05-nov-2002	2003204526	03816865	22-mrt-2016	Sub-picture display control	
JP	504179JP02	2003197545	16-jul-2003	2004047081	03756496	05-apr-2016	Highlight PTS	
JP	504182JP01	1996059836	15-mrt-1996	1997252449	03480777	15-mrt-2016	Audio frame number	
JP	504182JP02	2002314257	29-okt-2002	2003187530	03480845	15-mrt-2016	Audio frame number	
JP	504184JP01	1996063591	19-mrt-1996	1997259574	03719758	19-mrt-2016	Attribute information	
JP	504185JP01	1996066404	22-mrt-1996	1997259506	03696327	22-mrt-2016	Cell contents information	
JP	504186JP01	1996061473	18-mrt-1996	1997251762	03748936	18-mrt-2016	First access unit pointer	
JP	504187JP01	1996061472	18-mrt-1996	1997251723	03969762	18-mrt-2016	24 bit data alignment	
JP	504187JP02	2005351144	05-dec-2005	2006079828	04077005	18-mrt-2016	24 bit data alignment	
JP	504188JP02	2001400061	28-dec-2001	2002237150	04112857	28-feb-2016	Minimum readout rate	
JP	504189JP01	1996059835	15-mrt-1996	1997251717	03816572	15-mrt-2016	Audio frame	
JP	513047JP06	2004182933	21-jun-2004	2004303415	04051357	01-jul-2016	Layout of Land Pre-Pit	*grant for Pioneer's share
JP	523180JP02	2005037293	15-feb-2005	2005174549	03720350	20-aug-2018	Recording clock signal	
JP	524095JP01	1997219418	14-aug-1997	1999066753	03450662	14-aug-2017	Structure of Simple Audio Manager	
JP	524095JP02	2000059720	06-mrt-2000	2000293972	03450787	14-aug-2017	Structure of Simple Audio Manager	
JP	533118JP01	1999021206	29-jan-1999	2000222822	03912922	29-jan-2019	Navigation Data Structure	
JP	534159JP01	1998336396	26-nov-1998	2000163885	03318535	26-nov-2018	Audio packet for Packed PCM	
JP	534160JP02	2002215954	25-jul-2002	2003123395	04077264	25-nov-2018	Audio packet for Packed PCM	
JP	550371JP01	2000273917	08-sep-2000	2001148166	04302304	08-sep-2020	Format operation	

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JP	560324JP01	2001307781	03-okt-2001	2003168261	03647786	03-okt-2021	Adapted recording data type	
KR	504102KR01	62001/96	05-dec-1996	97-56160	00329456	05-dec-2016	Digital data transmitting	
KR	513047KR01	12187/97	02-apr-1997	97-71533	00478863	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
KR	533117KR01	20000003993	27-jan-2000	2000-0053642	00704860	27-jan-2020	Navigation Data Structure	
KR	533118KR01	20000003933	27-jan-2000	2000-0053633	00750711	27-jan-2020	Navigation Data Structure	
KR	533119KR01	20000003682	26-jan-2000	2000-0053625	00720017	26-jan-2020	Navigation Data Structure	
KR	540055KR01	20000053355	08-sep-2000		00632337	08-sep-2020	Format operation	
KR	560229KR01	20037004888	09-okt-2001	2003-0034252	00519712	09-okt-2021	Adapted recording data type	
MX	504102MX01	966099	05-dec-1996		195994	05-dec-2016	Digital data transmitting	
MX	513047MX01	972413	02-apr-1997		223525	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
MX	513047MX02	PA/a/2003/004277	15-mei-2003		247757	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
MX	560229MX01	PA/a/2003/003031	09-okt-2001	WO02/31819	238859	09-okt-2021	Adapted recording data type	
MY	504102MY01	PI9605068	03-dec-1996		MY-112856-A	03-dec-2016	Digital data transmitting	
MY	513047MY01	PI97001419	02-apr-1997		127657	29-dec-2021	Layout of Land Pre-Pit	*grant for Pioneer's share
NL-EP	504102EP02	03025667.1	07-nov-2003	1403869	01403869	05-dec-2016	Digital data transmitting	
NL-EP	504102EP04	06115016.5	06-jun-2006		01715485	05-dec-2016	Digital data transmitting	
NL-EP	504102EP05	06115021.5	06-jun-2006		01715486	05-dec-2016	Digital data transmitting	
NL-EP	560229EP01	01974735.1	09-okt-2001	WO02/31819	01325499	09-okt-2021	Adapted recording data type	
PH	560229PH01	1-2003-500203	09-okt-2001	WO02/31819	1-2003-500203	09-okt-2021	Adapted recording data type	
RU	513047RU01	97105090	01-apr-1997		2219595	01-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
SG	504102SG01	9611511-8	04-dec-1996		79210	04-dec-2016	Digital data transmitting	
SG	513047SG01	9701008-6	29-mrt-1997		47218	29-mrt-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
SG	560229SG01	200301409-9	09-okt-2001	WO02/31819	95531	09-okt-2021	Adapted recording data type	
TH	504102TH01	9601004164	02-dec-1996		9825	02-dec-2016	Digital data transmitting	
TH	513047TH01	036591	31-mrt-1997	30098	33048	31-mrt-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
TW	504102TW01	85114966	04-dec-1996		88955	03-dec-2016	Digital data transmitting	
TW	513047TW01	86103929	01-apr-1997		158436	01-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
TW	533117TW01	89101318	26-jan-2000		188353	25-jan-2020	Navigation Data Structure	
TW	533118TW01	89101496	28-jan-2000		141318	28-jan-2020	Navigation Data Structure	

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TW	533119TW01	89101180	25-jan-2000		140982	25-jan-2020	Navigation Data Structure
TW	540055TW01	89118427	08-sep-2000		153832	08-sep-2020	Format operation
TW	560229TW01	90124862	05-okt-2001		169834	04-okt-2021	Adapted recording data type
US	503028US01	08/668334	25-jun-1996		06181657	25-jun-2016	Layout of Land Pre-Pit
US	503031US02	09/846557	27-apr-2001		RE38602	24-jun-2016	Optimum Power Control
US	503032US01	08/672035	26-jun-1996		05808992	26-jun-2016	Border Zone
US	503111US01	08/780288	08-jan-1997		05901123	08-jan-2017	Layout of Land Pre-Pit
US	503111US03	10/178649	24-jun-2002	2002-0154586	06731575	08-jan-2017	Layout of Land Pre-Pit
US	503141US02	09/876509	07-jun-2001		06735155	01-apr-2017	Linking scheme
US	503141US03	10/693306	24-okt-2003		07126898	01-apr-2017	Linking scheme
US	503141US04	10/772512	05-feb-2004	2004-0156283	07123576	01-apr-2017	Linking scheme
US	504030US01	08/504793	20-jul-1995		05608715	20-jul-2015	Multi layer disc
US	504041US01	08/675016	03-jul-1996		05892983	03-jul-2016	Time map
US	504046US01	08/671652	28-jun-1996		05758008	28-jun-2016	Cell elapse time information
US	504050US01	08/677452	02-jul-1996		05636186	02-jul-2016	Audio channel contents information
US	504102US02	10/785864	25-feb-2004		RE40312	03-dec-2016	Digital data transmitting
US	504164US01	08/816941	14-mrt-1997		06085021	14-mrt-2017	Access restriction control
US	504165US01	08/819012	17-mrt-1997		06157769	17-mrt-2017	Still picture playback control
US	504165US03	10/156393	29-mei-2002	2002-0176695	07242848	01-feb-2020	Still picture playback control
US	504166US01	08/806459	26-feb-1997		06006004	26-feb-2017	Separation of PCI and DSI
US	504166US03	09/780384	12-feb-2001		06396997	26-feb-2017	Highlight information
US	504167US01	08/816686	13-mrt-1997		06148138	13-mrt-2017	2 types of VOBUs
US	504169US03	11/199271	09-aug-2005		RE42506	17-mrt-2017	VOBU search information
US	504170US02	10/606831	27-jun-2003	2004-0095812	07295762	26-apr-2017	Video information recorded on a multilayer disc
US	504174US02	10/091221	28-feb-2002		RE38569	13-mrt-2017	VOB ID, Cell ID
US	504175US01	08/825560	20-mrt-1997		05889746	20-mrt-2017	Text information
US	504175US03	10/152036	22-mei-2002	2004-0136281	RE39110	20-mrt-2017	Text information
US	504176US01	08/822157	17-mrt-1997		06091674	17-mrt-2017	Time search map
US	504179US02	09/440290	15-nov-1999		06266478	01-apr-2017	Highlight PTS

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US	504179US03	09/862457	23-mei-2001	2001-0051040	06567612	01-apr-2017	Highlight PTS	
US	504181US01	08/833476	07-apr-1997		05936925	07-apr-2017	Audio frame alignment	
US	504182US01	08/812882	06-mrt-1997		06108486	06-mrt-2017	Audio frame number	
US	504184US01	08/820257	18-mrt-1997		06104684	18-mrt-2017	Attribute information	
US	504184US02	09/559971	28-apr-2000		06757483	18-mrt-2017	Attribute information	
US	504184US03	10/858268	02-jun-2004		07840117	09-jul-2022	Attribute information	
US	504185US01	08/821920	21-mrt-1997		05742569	21-mrt-2017	Cell contents information	
US	504186US01	08/819861	17-mrt-1997		05805537	17-mrt-2017	First access unit pointer	
US	504187US01	08/819011	17-mrt-1997		06014495	17-mrt-2017	24 bit data alignment	
US	504187US02	09/452889	02-dec-1999		06778761	17-mrt-2017	24 bit data alignment	
US	504188US01	08/806458	26-feb-1997		06236804	26-feb-2017	Minimum readout rate	
US	504189US01	08/815184	11-mrt-1997		05960152	11-mrt-2017	Audio frame	
US	504189US02	09/332867	15-jun-1999		06597861	11-mrt-2017	Audio frame	
US	513047US01	08/825890	02-apr-1997		06075761	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
US	513047US03	10/238760	10-sep-2002		06646963	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
US	513047US06	10/238761	10-sep-2002		06606289	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
US	523082US05	10/117184	08-apr-2002	2002-0110060	06487150	20-feb-2018	Recording clock signal	
US	533118US01	09/493188	28-jan-2000	2003-0123346	07406008	28-jan-2020	Navigation Data Structure	
US	540055US01	09/659580	11-sep-2000		06885623	13-dec-2021	Format operation	
US	560229US01	10/398183	09-okt-2001	2004-0078097	07394739	23-mrt-2023	Adapted recording data type	
US	580644US01	10/588954	31-jan-2005		07839755	21-jun-2027	Compressed Audio Files	
VN	504102VN01	1-1996-90429	04-dec-1996		1-0001518	04-dec-2016	Digital data transmitting	
VN	513047VN01	1-1997-00249	02-apr-1997		1-0002045	02-apr-2017	Layout of Land Pre-Pit	*grant for Pioneer's share
VN	560229VN01	1-2003-00405	09-okt-2001	8449	1-0005474	09-okt-2021	Adapted recording data type	
ZA	560229ZA01	2003/2170	09-okt-2001	WO02/31819	2003/2170	09-okt-2021	Adapted recording data type	