

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CERENCE OPERATING CO.,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.; and
SAMSUNG ELECTRONICS AMERICA,
INC.,

Defendants.

Case No. 2:23-cv-00482-JRG-RSP

JURY TRIAL DEMANDED

DEFENDANTS' SECOND AMENDED INVALIDITY CONTENTIONS

Pursuant to the Local Patent Rules and the Court's Scheduling Order, Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Samsung" or "Defendants") provide these Second Amended Invalidity Contentions with respect to the Asserted Claims of U.S. Patent Nos. 7,395,078 ("078 patent), 8,081,993 ("993 patent"), 11,393,461 ("461 patent"), 11,087,750 ("750 patent"), and 9,026,428 ("428 patent"), (collectively, the "Asserted Patents") identified by Cerence Operating Co., ("Cerence" or "Plaintiff") in its Infringement Contentions.¹

The Asserted Claims, as reflected in Plaintiff's Infringement Contentions, are as follows:

U.S. Patent No.	Asserted Claims
7,395,078	1-3, 8-10, 12, 15-17
8,081,993	1-2, 6-8, 10-11, 15-17
11,393,461	1-18

¹ Plaintiff served infringement contentions on March 11, 2024. Plaintiff also served what it purports are amended infringement contentions on August 7, 2024. However, Plaintiff has failed to either seek leave to amend its contentions or obtain Samsung's consent to substitute its amended infringement contentions. Plaintiff's original March 11, 2024 infringement contentions remain operative and are referred to as the "Infringement Contentions."

Number	Filing Date	Published/Issued Date	Short Name	Exhibit Numbers
US 6,516,298B1	April 17, 2000	February 4, 2003	Kamai	B-4
US 6,073,094A	June 2, 1998	June 6, 2000	Chang	B-5
US 2004/0176114A1	March 6, 2003	September 9, 2004	Northcutt	B-6
EP1039768A2	March 20, 2000	September 27, 2000	Sim	B-7
US 5,617,507A	July 14, 1994	April 1, 1997	Lee	B-8
WO 2004/019583A2	August 4, 2003	March 4, 2004	Guglielmi	B-9
US 4,799,261A	September 8, 1987	January 17, 1989	Lin	B-10
US 6,304,845B1	August 3, 2000	October 16, 2001	Hünlich	B-11
US 6,173,250B1	June 3, 1998	January 9, 2001	Jong	B-12
US 5,630,205A	June 14, 1994	May 13, 1997	Ekelund	B-13

c) The '461 Patent

Number	Filing Date	Published/Issued Date	Short Name	Exhibit Numbers
US20200279576A1	2020-05-20	2020-09-03	Binder	C-1
US20120265528A1	2011-09-30	2012-10-18	Gruber	C-2
US20130110521A1	2012-05-30	2013-05-02	Hwang	C-3
US9031847B2	2011-11-15	2015-05-12	Sarin	C-4
US20140012573A1	2012-09-13	2014-01-09	Hung	C-5

Number	Filing Date	Published/Issued Date	Short Name	Exhibit Numbers
US20120296655A1	2012-07-31	2012-11-22	Kristijansson	C-6
US20150162002A1	2011-12-07	2015-06-11	Liu	C-7
US20130080171A1	2011-09-27	2013-03-28	Mozer '171	C-8
US20130289994A1	2012-04-26	2013-10-31	Newman	C-9
US20100009719A1	2009-05-21	2010-01-14	Oh	C-10
US20150106089A1	2010-12-30	2015-04-16	Parker	C-11
US20130339028A1	2012-06-15	2013-12-19	Rosner '028	C-12
US20100332236A1	2010-06-23	2010-12-30	Tan	C-13
US20140244269A1	2013-02-28	2014-08-28	Tokutake	C-14
US20100312547A1	2009-06-05	2010-12-09	Van Os	C-15
US7383189B2	2004-04-07	2008-06-03	Halonen	C-19
US8359020B2	2010-08-06	2013-01-22	Lebeau	C-20
US8713119B2	2012-09-13	2014-04-29	Lindahl	C-21
US20140006825A1	2012-06-30	2014-01-02	Shenhav	C-22

d) The '750 Patent

Number	Filing Date	Published/Issued Date	Short Name	Exhibit Numbers
US20140163978A1	2012-12-11	2014-06-12	Basye	D-1

Number	Filing Date	Published/Issued Date	Short Name	Exhibit Numbers
US20200279576A1	2020-05-20	2020-09-03	Binder	D-2
US20120265528A1	2011-09-30	2012-10-18	Gruber	D-3
US20140237277A1	2013-03-08	2014-08-21	Mallinson	D-4
US20140006825A1	2012-06-30	2014-01-02	Shenhav	D-5
US20130080167A1	2011-12-16	2013-03-28	Mozer '167	D-6
US20130289994A1	2012-04-26	2013-10-31	Newman	D-7
US9552037B2	2012-04-23	2017-01-24	Ooi	D-8
US20150106089A1	2010-12-30	2015-04-16	Parker	D-9
US9031847B2	2011-11-15	2015-05-12	Sarin	D-10
US9818407B1	2013-02-07	2017-11-14	Secker-Walker	D-11
US20090043580A1	2008-07-24	2009-02-12	Mozer '580	D-12
US2011/0166855	2010-07-06	2011-07-07	Vermeulen	D-13
US8713119B2	2012-09-13	2014-04-29	Lindahl	D-17
US8359020B2	2010-08-06	2013-01-22	Lebeau	D-18
US20110314185A1	2011-08-31	2011-12-22	Conroy	D-19

VI. OTHER RELEVANT REFERENCES

Defendants hereby cite the following additional references as being relevant to the subject matter claimed in the Asserted Patents. *In addition to those references cited in the sections below, Defendants incorporate by reference all those references found on the face of the Asserted Patents and/or in the prosecution history.* Defendants reserve the right to rely on one or more of the following references as anticipatory references under 35 U.S.C. §102, as further evidence of obviousness under 35 U.S.C. §103, as background references demonstrating the state of the art, as a limitation upon the doctrine of equivalents, or for any other purpose. Based on further investigation and discovery, based on positions that Plaintiff may take regarding the scope of the asserted claims, and/or based on the Court's claim construction, Defendants reserve the right to revise these contentions and to rely on these references to prove the invalidity of the Asserted Patents in a manner consistent with this Court's Rules and with the Federal Rules of Civil Procedure.

A. The '078 and '993 Patents

1. Prior Art Patents and Applications

Number	Filing Date	Published/Issued Date	Short Name
US6977921B1	August 19, 1998	December 20, 2005	Dolan '921
KR20010003635A	June 24, 1999	January 15, 2001	Sim
WO1999053682A1	April 15, 1999	October 21, 1999	He
US6061718A	July 23, 1997	May 9, 2000	Nelson
US6173259B1	March 27, 1998	January 9, 2001	Bijl
KR20030024409A	September 18, 2001	Mar. 26, 2003	Cho

Number	Filing Date	Published/Issued Date	Short Name
JP2000010578A	June 19, 1998	January 14, 2000	Shirotsuka
WO2000035214A1	October 16, 1999	June 15, 2000	Hans
KR20010047394A	November 19, 1999	November 7, 2002	Jin
WO2003034271A2	October 11, 2002	April 24, 2003	Alber
JP2000-138956A	August 18, 1999	May 16, 2000	Dolan '956
KR20030086756A	May 6, 2002	November 12, 2003	Baek
US20020169610A1	April 5, 2002	November 14, 2002	Luegger
US6636733B1	March 31, 2000	October 21, 2003	Helferich '733
EP1273162A2	April 2, 2001	January 8, 2003	Helferich '162
US20030194990A1	May 27, 2003	October 16, 2003	Helferich '990
CA2404409A1	April 2, 2001	October 11, 2001	Helferich '409
KR20010027175A	September 10, 1999	April 6, 2001	Kim '175
KR20030037316A	November 1, 2001	May 14, 2003	Kim '316
US6449342B1	May 5, 1999	September 10, 2002	Johanson
US20030139922A1	December 12, 2002	July 10, 2007	Hoffmann
US6636733B1	March 31, 2000	October 21, 2003	Helferich '733
US6163765A	March 30, 1998	December 19, 2000	Andric
US20030088418A1	October 7, 2002	May 8, 2003	Kagoshima
US20030139922A1	December 12, 2002	July 24, 2003	Hoffmann

Number	Filing Date	Published/Issued Date	Short Name
US20030120492A1	February 26, 2002	June 26, 2003	Kim '492
US20020163544A1	March 2, 2001	November 7, 2002	Baker '544
US6452947B1	July 2, 1998	September 17, 2002	Kojima
US6574598B1	January 13, 1999	June 3, 2003	Nakatsuyama
US20060161426A1	January 19, 2006	July 20, 2006	Ikegami
US20060258378A1	June 20, 2003	November 16, 2006	Kaikuranata
US7184049B2	May 8, 2003	February 27, 2007	Ballin
US20030210280A1	May 1, 2003	November 13, 2003	Baker '280
GB2370190A	December 13, 2000	June 19, 2002	Cooper
WO1999000791	November 5, 1997	January 7, 1999	Mermelstein
US6324515B1	June 2, 1998	November 27, 2001	Rabipour
US5870427	June 1, 1995	February 9, 1999	Tiedemann
US5963548	January 21, 1997	October 5, 1999	Virtanen
US6081724	January 31, 1996	June 27, 2000	Wilson
WO2001039177A2	November 22, 2000	May 31, 2001	Huang '177

2. Prior Art Publications

Author or Publisher	Title	Publication/Use Date
Masuko et al.	"A Very Low Bit Rate Speech Coder Using HMM with Speaker Adaption"	1997
Pagarkar et al.	"Language Independent Speech Compression Using Devanagari Phonetics"	December 1, 2003
GSM-SMS	Digital cellular telecommunications system (Phase 2+); Technical realization of the Short Message Service (SMS) Point-to-Point (PP) (3GPP TS 03.40 version 7.5.0 Release 1998)	2001
GSM-SMS	Universal Mobile Telecommunications System (UMTS); Technical realization of the Short Message Service (SMS) (3G TS 23.040 version 3.4.1 Release 1999)	2001
GSM-SMS	3rd Generation Partnership Project; Technical Specification Group Terminals; Technical realization of the Short Message Service (SMS); (Release 6)	2002
GSM-SMS	Digital cellular telecommunications system (Phase 2+); General description of a GSM Public Land Mobile Network (PLMN) (GSM 01.02)	March 1996
GSM-SMS	Digital cellular telecommunications system (Phase 2+); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface (GSM 04.11 version 7.0.0 Release 1998)	1999
GSM-SMS	Digital cellular telecommunications system (Phase 2+); Compression algorithm for text messaging	1999

Author or Publisher	Title	Publication/Use Date
	services (GSM 03.42 version 7.1.1 Release 1998)	
GSM-SMS	Digital cellular telecommunications system (Phase 2+); Mobile Station - Base Station System (MS - BSS) interface; Channel structures and access capabilities (GSM 04.03 version 7.0.0 Release 1998)	1999
GSM-SMS	Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification (GSM 04.08 version 7.2.0 Release 1998)	1999
GSM-SMS	Digital cellular telecommunications system (Phase 2+); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface (GSM 04.11 version 7.0.0 Release 1998)=	1999
MMS	Open Mobile Alliance (OMA) Enabler Release Definition for MMS Version 1.1 Version 4-Nov-2002	2002
MMS	Open Mobile Alliance (OMA) MMS Conformance Document Version 2.0.0 Version 6-Feb-2002	2002
MMS	Open Mobile Alliance (OMA) Multimedia Messaging Service Architecture Overview Version 1.1 Version 01-Nov-2002	2002
MMS	Open Mobile Alliance (OMA) Multimedia Messaging Service Client Transactions Version 1.1 Version 31-Oct-2002	2002
MMS	Open Mobile Alliance (OMA) Multimedia Messaging Service Encapsulation Protocol Version 1.1 Version 30-October-2002	2002

Author or Publisher	Title	Publication/Use Date
Roth	International Application Status Report, WO 2005/104092 (Roth); PCT/US2005/013478	November 30, 2005

B. The '461 and '750 Patents

1. Prior Art Patents and Applications

Number	Filing Date	Published/Issued Date	Short Name
JP2007286180A	2006-04-13	2007-11-01	Kaneko
US 2012/0035931	2011-09-29	2012-02-09	LeBeau
US 2013/0339028	2012-06-15	2013-12-19	Rosner
US 2014/0164476	2012-12-06	2014-06-12	Thomson
US10573304	2015-11-04	2020-02-25	Gemmeke
US11223882B2	2020-04-13	2022-01-11	Ferren
US20050216271	2005-02-04	2005-09-29	Konig
US20060074658	2004-10-01	2006-04-06	Chadha
US20070281761	2006-09-07	2007-12-06	Kim '761
US20080228493	2007-03-12	2008-09-18	Hu
US20090204410	2008-07-10	2009-08-13	Mozer 410
US20100082351	2007-09-12	2010-04-01	Lee
US20100088100	2008-10-02	2010-04-08	Lindahl
US20110131291	2010-09-28	2011-06-02	Hon-Anderson
US20110208524	2010-02-25	2011-08-25	Haughay

Number	Filing Date	Published/Issued Date	Short Name
US20110306304	2010-06-10	2011-12-15	Forutanpour
US2012/0035931	2011-09-29	2012-02-09	LeBeau
US20120016670	2010-07-13	2012-01-19	Khorashadi
US20120016678	2011-01-10	2012-01-19	Gruber '678
US20120078397	2011-03-30	2012-03-29	Lee
US20120089392	2010-10-07	2012-04-12	Larco
US20120137156	2011-11-07	2012-05-31	Huang '156
US20120296655	2012-07-31	2012-11-22	Kristjansson
US2013/0110521	2012-05-30	2013-05-02	Hwang
US20130080167	2011-12-16	2013-03-28	Mozer 167
US20130080171	2011-09-27	2013-03-28	Mozer 171
US20130085755	2012-09-15	2013-04-04	Bringert
US20130124207	2011-11-15	2013-05-16	Sarin '207
US20130173269	2012-06-03	2013-07-04	Adler
US20130197915	2012-09-27	2013-08-01	Burke
US20140244268	2013-02-27	2014-08-28	Abdelsamie
US20140244273	2014-02-26	2014-08-28	Laroche
US20150051913	2012-03-16	2015-02-19	Choi

Number	Filing Date	Published/Issued Date	Short Name
US20150127345	2011-09-30	2015-05-07	Parker '345
US20150138333	2012-02-28	2015-05-21	DeVaul
US20160086603	2015-09-21	2016-03-24	Rosner
US20200219384	2019-12-04	2020-07-09	Chen
US5345538	1992-01-27	1994-09-06	Narayannan
US6198947	1996-03-09	2001-03-06	Barber
US6212408	1999-05-03	2001-04-03	Son
US6321199	1999-04-13	2001-11-20	Theimer
US6839670	1996-09-09	2005-01-04	Stammmler
US7171356	2002-06-28	2007-01-30	Deisher
US7349851	2005-03-21	2008-03-25	Zuberec
US7472020	2005-08-04	2008-12-30	Brülle-Drews
US7475012	2004-12-09	2009-01-06	Garner
US7664642	2005-03-17	2010-02-16	Espy-Wilson
US8195467	2008-07-10	2012-06-05	Mozer
US8331315	2008-09-12	2012-12-11	Purkayastha
US8396458	2012-04-06	2013-03-12	Raleigh
US8396463	2012-03-09	2013-03-12	Marcellino

Number	Filing Date	Published/Issued Date	Short Name
US8442447	2010-02-01	2013-05-14	Veluppillai
US8483780	2012-05-16	2013-07-09	Goris
US8681949	2011-11-28	2014-03-25	Witten
US8694316	2005-10-20	2014-04-08	Pickering
US8843173	2013-03-15	2014-09-23	Lee
US8861351	2013-08-13	2014-10-14	Brisebois
US8898496	2012-03-23	2014-11-25	Chi
US8996375	2013-07-26	2015-03-31	Gagnon
US9082035	2012-04-18	2015-07-14	Hwang '035
US9098467	2012-12-19	2015-08-04	Blanksteen
US9099098	2012-11-06	2015-08-04	Atti
US9142215	2012-06-15	2015-09-22	Rosner
US9148501	2013-07-02	2015-09-29	Korn
US9256269	2013-03-08	2016-02-09	Mallinson '269
US9275637	2012-11-06	2016-03-01	Salvador
US9275642	2013-03-15	2016-03-01	Abdossalami
US9368113	2013-01-30	2016-06-14	LeBeau
US9374451	2002-02-04	2016-06-21	Salmenkaita

Number	Filing Date	Published/Issued Date	Short Name
US9401144	2015-04-24	2016-07-26	Garber
US9437206	2013-03-15	2016-09-06	Yu
US9510094	2014-04-09	2016-11-29	Paquier
US9552037	2012-04-23	2017-01-24	Ooi
US9620144	2013-12-27	2017-04-11	Parkinson
US9634855	2011-05-12	2017-04-25	Poltorak
US9818407	2013-02-07	2017-11-14	Secker-Walker
US9842489	2013-02-14	2017-12-12	Shires
US9858925	2011-09-30	2018-01-02	Gruber '925
US9947333	2012-02-10	2018-04-17	David
US9998977	2015-11-12	2018-06-12	Joshi
WO2012025784	2010-08-23	2012-03-01	Savolainen

2. Prior Art Publications

Author or Publisher	Title	Publication/Use Date
V.Z. Kēpuska	A Novel Wake-Up-Word Speech Recognition System, Wake-Up-Word Recognition Task, Technology And Evaluation	December 15, 2009
Gopala Krishna Anumanchipalli (IEEE)	Significance Of Early Tagged Contextual Graphemes In Grapheme Based Speech	May 12, 2008

Author or Publisher	Title	Publication/Use Date
	Synthesis And Recognition Systems	
Ron Amadeo	Full Hands-On With Samsung's S Voice From The Galaxy S III	MAY 20, 2012
Alistair Charlton	Samsung Galaxy S3 Mini Review	December 14, 2012
Charles Arthur	Samsung Galaxy S3: the latest bid to dominate the Android market	May 4, 2012
David Daw	What Makes Siri Special?	October 24, 2011
Federico Viticci	Apple Officially Unveils Siri Voice Assistant – Supports English, French and German	October 4, 2011
Samsung	GT-I9300 user manual	2012
Samsung	Galaxy S III User Guide (Virgin Mobile)	2013
Samsung	Galaxy S III User Manual (T-Mobile)	2013
Samsung	Galaxy S III User Manual (Android)	2012
Samsung	Galaxy S 4 User Manual	2015
Samsung	Galaxy S 4 Mini User Manual (4G LTE)	2014
Samsung	GT-S7562 user manual	2012
Apple	iPhone User Guide For iOS 6.1 Software	2013
Samsung	Galaxy Mega User Manual (4G LTE)	2013
Apple	iPhone User Guide For iOS 5.1 Software	2012
Apple	iPhone User Guide For iOS 7.1 Software	2014
Apple	iPhone User Guide For iOS 5.0 Software	2011
Samsung	Galaxy Axiom User Manual (SCH – R830 Android)	2012

C. The '428 Patent

1. Prior Art Patents and Applications

Number	Filing Date	Published/Issued Date	Short Name
US2005/0219226	2004-04-02	2005-10-06	Liu '226
US2006/0239561	2006-07-03	2006-10-26	Huapaya
JP H06259605	1993-03-02	1994-09-16	Shimabara
JP 2008/250708	2007-03-30	2008-10-16	Kawajiri
JP 2012/073757	2010-09-28	2012-04-12	Sudo
JP H08255157	1995-03-15	1996-10-01	Oka
JP H0916710	1995-07-03	1997-01-17	Kazamaki
JP 3456931	1999-12-10	2003-10-14	Hirose '931
U.S. 2009/0198691	2008-02-05	2009-08-06	Kraft
WO 2007/068505A1	2006-06-16	2007-06-21	Cocco
U.S. 2005/0043949	2004-09-24	2005-02-24	Roth '949
U.S. 2014/0085215	2012-09-26	2014-03-27	Och '215
JP 2003/196593	2001-12-28	2003-07-11	Kawamura '593
U.S. 2009/0226091	2008-03-04	2009-09-10	Goldsmith '091
U.S. 2011/0090151	2009-04-20	2011-04-21	Huang '151
U.S. 2008/0235003	2008-03-18	2008-09-25	Lai
U.S. 2002/0064308	1997-07-22	1999-12-21	Altman '308

Number	Filing Date	Published/Issued Date	Short Name
U.S. 6,005,973	2004-12-05	2008-12-16	Seybold '973
U.S. 7,467,089	2004-12-13	2006-10-31	Roth '089
U.S. 7,130,798	2008-10-03	2011-07-05	Williamson '798
US 7,974,979	2002-05-13	2006-01-10	Qui
U.S. 6,986,106	2003-12-15	2009-03-17	Soin '106
U.S. 7,506,271	2004-12-27	2009-09-01	Wang '271
U.S. 7,583,825	2006-05-30	2007-12-13	Wang '825
US2007/0286486	2007-07-18	2012-03-07	Goldstein '486
JP 4,890,551	2007-11-20	2009-03-10	Hirose '551
U.S 7,502,017	1994-10-19	1997-01-14	Ratzlaff
U.S. 5,594,640	2003-07-18	2007-01-18	Capps
US20070014475	1985-11-12	1988-11-08	Prymus
U.S. 4,783,803	1986-08-11	1989-09-12	Baker '803
U.S. 4,866,778	1997-06-26	2000-08-08	Baker '778
U.S. 6,101,468	2000-08-01	2007-11-06	Gould
U.S. 7,293,231	1995-10-25	2000-07-25	Gunn
U.S. 6,094,506	2002-07-30	2006-11-14	Hullender
U.S. 7,137,076	2010-07-02	2012-01-10	Iwema

Number	Filing Date	Published/Issued Date	Short Name
U.S. 8,095,364	2004-08-30	2008-08-26	Longe
U.S. 7,418,137	1986-12-01	1989-06-13	Luice
U.S. 4,839,634	1997-06-03	2000-03-07	More
U.S. 6,035,063	2000-07-25	2003-01-28	Nakashima
U.S. 6,513,005	1995-01-23	1999-12-14	Qin
U.S. 6,002,799	2001-05-02	2005-06-28	Sklarew
U.S. 6,912,498	1996-10-01	1998-12-29	Stevens
U.S. 5,855,000	1990-11-13	1996-02-13	Waibel
U.S. 5,491,495	1999-05-18	2002-08-20	Ward
U.S. 6,438,523	2012-09-03	2016-11-08	Oberteuffer
U.S. 9,489,571	1995-12-28	1998-07-28	Kuno '571
US 5,787,455	2012-01-17	2016-11-29	Seybold '455
U.S. 9,507,435	1996-06-14	1999-01-19	Markiewicz '435
U.S. 5,862,256	2000-08-22	2004-10-05	Zetts
U.S. 6,801,660	2004-05-04	2005-11-10	Williamson '660
U.S. 2005/0249419	2002-06-14	2002-12-27	Rieman
WO 2002/103619	2004-03-17	2005-02-03	Lindberg
U.S. 2005/0027534	2005-10-14	2006-12-14	Meurs

Number	Filing Date	Published/Issued Date	Short Name
U.S. 2006/0282575	2009-02-13	2011-01-13	Schultz
U.S. 2011/0010175	1997-09-08	2002-12-10	Kitade
U.S. 6,493,464	1997-09-08	2002-12-10	Hawkins
JP 2004/246607	2003-02-13	2004-09-02	Hosokawa
U.S. 2004/0140956	2003-01-16	2004-07-22	Kushler '956
JP H10198759	1997-01-09	1998-07-31	Takasu
JP H06208655	1993-01-11	1994-07-26	Kawamura '655
U.S. 3,016,421	1960-11-30	1962-01-09	Harmon
U.S. 6,137,427	1998-10-27	2000-10-24	Binstead
U.S. 5,956,020	1995-07-27	1999-09-21	D'Amico
U.S. 7,928,964	2006-05-21	2011-04-19	Kolmykov-Zotov '964
U.S. 3,550,092	1967-04-11	1970-12-22	Yoshimaru
U.S. 7,369,865	2003-10-16	2008-05-06	Gabriel
U.S. Pub. No. 2008/0016132	2006-07-14	2008-01-17	Merhar
JP 2001/167229	1999-12-10	2001-06-22	Hirose '229
JP 2008/018274	2007-10-05	2008-01-31	Nishihata
JP3903016	2003-02-13	2007-04-11	Hosokawa
JP5627372	2010-09-28	2014-11-19	Tomohiro

Number	Filing Date	Published/Issued Date	Short Name
JPS5790652	1980-11-28	1982-06-05	Nakajima
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Dated: November 12, 2024

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423