

RECORD



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1. Name of conveying party(ies): Mamoru ONDA Nobuhiko SUZUKI	2. Name and address of receiving party(ies):
Hajime WASHIO	Name: Sharp Kabushiki Kaisha
Shunsuke HAYASHI	Internal Address:
Hiroshi MUROFUSHI	Street Address: 22-22, Nagaike-cho, Abeno-ku
Additional name/s of conveying party/ies attached?	
3. Nature of conveyance:	City: Osaka-shi, Osaka
Assignment	State/Country: <u>Japan</u>
Security Assignment Change of Name	Zip: <u>545-8522</u>
Other	_
Execution Date: 30 August 2004, 5 August 2004, August 2004, September 21, 2004 and September 21, 2004, respectively	Additional name/s & address/es attached? Yes No
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the ex-	ecution date of the application is:
it this document is being med together with a new approacher, the ex-	
A. Patent Application No(s).	B. Patent No(s).
(1) 10/860,660	(1)
(2)	(2)
(3)	
5. Name and address of party to whom correspondence	ers attached Yes No 6. Total number of applications & patents involved: 1
concerning document should be mailed:	o. Total number of applications & patents involved.
tomorning document should be married.	7. Total fee (37 CFR 3.41) \$ 40.00
Name: H. Warren Burnam, Jr.	□ Enclosed
	Authorized to be charged to deposit account #14-1140
Internal Address:	_
	8. The Commissioner is hereby authorized to charge any
Street Address: Nixon & Vanderhye P.C. 1100 North Glebe Road	deficiency in the fee(s) filed, or asserted to be filed, or which
8 th Floor	should have been filed herewith (or with any paper thereafter filed in this application by this firm) to our Account No.
City: Arlington State: VA Zip: 22201	14-1140.
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9. Statements and signature.	
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		MENI OF U.S. PAIENI	APPLICATION			
	Mamoru ONDA Hajime WASHIO					
(Inventors)	riajinie WASHIO					
				_		
(Assignee) (Address) (Title)	In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to SHARP KABUSHIKI KAISHA a corporation of Osaka, Japan 22-22 Nagaike-cho Abeno-ku Osaka-shi Osaka 545-8522 Japan (hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions in the invention, and all applications for patent and any Letters Patent which may be granted therefore, known as BIDIRECTIONAL SHIFT REGISTER AND DISPLAY DEVICE INCORPORATING SAME					
(Title)	BIDITLOTIONAL	OTH TREGIOTER ARE BIO	SI EAT DE TIOE INCOME OF CAME	_		
for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed on August 30, 2004 or has already filed U.S. application Serial No. 10/860, 660, on June 4, 2004. The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.						
The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.						
grant of a val	id United States pat	ent to the Assignee.	acts which may be necessary to obtain a			
The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.						
The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention.						
signature(s).			the date(s) opposite the undersigned			
Date	, Any, '04	Signature of inventor	Mamoru broda			
Date	. Aug : 64	Signature of inventor	Mamoru Anda Higima Wester			
Date		Signature of inventor				
Date		Signature of inventor				
Date		Signature of inventor	<u> </u>			
Witnessed by	r: <u>Yasuk</u>	ero hishida	Date30; Aug; '04			
Witnessed by	/ :		Date			

264637

Case No. : _____

REEL: 015834 FRAME: 0358

	Shunsuke HAYAS	SHI	APPLICATION			
(Inventors)						
(Assignee)	considerations pai- hereby does assig SHARP KABUSH	d to each of the undersigned n, transfer and set over to KI KAISHA	ar (\$1.00) and other good and valuable d, the undersigned agree(s) to assign, an a corporation of Osaka, Japan	d		
(Address)	22-22 Nagaike-cho Abeno-ku Osaka-shi Osaka 545-8522 Japan					
(Title)	(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions in the invention, and all applications for patent and any Letters Patent which may be granted therefore, known as BIDIRECTIONAL SHIFT REGISTER AND DISPLAY DEVICE INCORPORATING SAME					
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	patent in the Unite	d States of America or, if not	d on even date herewith an application fo t on even date, then has executed on S. application Serial No. 10/860, 660			
	The undersigned a	cknowledges an obligation on the control of the con	of assignment of this invention to said			
the application thereof and a Assignee main connection	on or any interference also to execute sepa ny deem necessary o	e which may be declared and rate assignments in connect or expedient and further to pe	documents necessary in connection with d any continuing or divisional applications tion with such applications as the erform any act which may be necessary onvention for Protection of Industrial	5		
	undersigned agree(s lid United States pat		acts which may be necessary to obtain a			
The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.						
The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention.						
In wi signature(s).	tness whereof, exec	uted by the undersigned on	the date(s) opposite the undersigned			
Date20	×4.8.14	Signature of inventor	Shursuke Hoyashi			
Date		Signature of inventor				
Date		Signature of inventor	·			
Date		Signature of inventor				
Date		Signature of inventor				
Witnessed by	y:		Date			
Witnessed by	y:		Date			

264637

Case No. : _____

	ASSIGNN	MENT OF U.S. PATEN		No		
	Hiroshi MUROFUSHI					
(Inventors)	Nobuhiko SUZUK	<u> </u>				
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(Assignee)	considerations paid	d to each of the undersigne n, transfer and set over to	llar (\$1.00) and other good a d, the undersigned agree(s) a corporation of Os	to assign, and		
(Address)	dress) 22-22 Nagaike-cho Abeno-ku Osaka-shi Osaka 545-8522 Japan					
(Title)	(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions in the invention, and all applications for patent and any Letters Patent which may be granted therefore, known as BIDIRECTIONAL SHIFT REGISTER AND DISPLAY DEVICE INCORPORATING SAME					
	patent in the Unite Seferator 2/, 2 June 4, 2004 The undersigned a	d States of America or, if no <u>∞ </u>	d on even date herewith an ot on even date, then has ex. S. application Serial No. of assignment of this invent	ecuted on 10/860, 660 , on		
the application thereof and a Assignee main connection	n or any interference Iso to execute sepa y deem necessary o	e which may be declared at rate assignments in connec or expedient and further to p	documents necessary in conditional any continuing or division attention with such applications aperform any act which may be onvention for Protection of I	al applications as the e necessary		
	undersigned agree(s id United States pat		acts which may be necessal	ry to obtain a		
any and all Le divisions or c and hereby c	etters Patent of the longituding application overlants that he ha	United States resulting from ns thereof to the said Assigns (they have) full right to co) the Commissioner of Pater a said application or any divis nee, as Assignee of the enti nvey the entire interest here te, any agreement in conflict	sion or re interest, in assigned,		
on this assign with the rules and agreed to	nment any further id of the United State hat ASSIGNEE'S at	entification which may be n s Patent Office for recordat	& VANDERHYE P.C. the post- ecessary or desirable in ord- ion of this document. It is a P.C. have represented only to this invention.	er to comply inderstood		
In wi signature(s).		uted by the undersigned or	the date(s) opposite the un	dersigned		
Date Sep	t. 21. 2004	Signature of inventor	Hiroshi Murof	ushi		
Date Ve	pt. 21. 200 K	Signature of inventor	Nobuhiko Juza	u f s'		
Date		Signature of inventor				
		Signature of inventor				
Date		Signature of inventor				
Witnessed b	y: Joshihari	. Uch: umi	Date Sept. 21.	2004		
Witnessed b	y;		Date			

PATENT⁶⁴⁶³⁷ REEL: 015834 FRAME: 0360

RECORDED: 09/28/2004