

04-19-2004



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Our Ref.: 124-957  
124-1062

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Commissioner of Patents  
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Alexandria, VA 22313-1450

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

<p>1. Name of conveying party(ies): QinetiQ Limited</p> <p>Additional name/s of conveying party/ies attached? <input type="checkbox"/></p> <p>3. Nature of conveyance:  <input checked="" type="checkbox"/> Assignment      <input type="checkbox"/> Merger  <input type="checkbox"/> Security Assignment      <input type="checkbox"/> Change of Name  <input type="checkbox"/> Other</p> <p>Execution Date: <u>December 20, 2002</u></p>	<p>2. Name and address of receiving party(ies):</p> <p>Name: <u>ZBD DISPLAYS LIMITED</u>  Internal Address: _____  Street Address: <u>Malvern Hills Science Park, Geraldine Road</u>  _____  _____  City: <u>Malvern</u>  State/Country: <u>United Kingdom</u>  Zip: <u>WR14 3SZ</u></p> <p>Additional name/s &amp; address/es attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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4. Application number(s) or patent number(s):  
If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

<p>A. Patent Application No(s).  (1) <u>10/212,141</u>  (2) <u>10/775,342</u>  (3) _____</p>	<p>B. Patent No(s).  (1) <u>6,249,332</u>  (2) _____  (3) _____</p> <p>Additional numbers attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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<p>5. Name and address of party to whom correspondence concerning document should be mailed:</p> <p>Name: <u>Stanley C. Spooner</u>  Internal Address: _____  Street Address: <u>Nixon &amp; Vanderhye P.C.</u>  <u>1100 North Glebe Road</u>  <u>8<sup>th</sup> Floor</u>  City: <u>Arlington</u> State: <u>VA</u> Zip: <u>22201</u></p>	<p>6. Total number of applications &amp; patents involved: <u>3</u></p> <p>7. Total fee (37 CFR 3.41) \$ <u>120.00</u>  <input checked="" type="checkbox"/> Enclosed  <input type="checkbox"/> Authorized to be charged to deposit account #14-1140</p> <p>8. The Commissioner is hereby authorized to charge any <u>deficiency</u> in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper thereafter filed in this application by this firm) to our <b>Account No. 14-1140.</b></p>
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**DO NOT USE THIS SPACE**

9. Statements and signature.  
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

<p><u>Stanley C. Spooner</u>  Name of Person Signing  Reg. No. 27,393</p>	 Signature	<p><u>April 14, 2004</u>  Date</p>
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Total number of pages including **original** cover sheet, attachments, and document: [14]

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of the original.

Sarah Trapp 9/1/03

**PATENT ASSIGNMENT**  
**Trapp**  
**Solicitor (Scotland)**  
**Parishborough, Harrogate**

THIS ASSIGNMENT is dated 20<sup>th</sup> December 2002

- (1) **QINETIQ LIMITED** (the "Assignor") a company registered in England and Wales with registered number 3796233 whose registered office is at 85 Buckingham Gate, London SW1 6PD; and
- (2) **ZBD DISPLAYS LIMITED** (the "Assignee") a company registered in England and Wales with registered number 3929602 whose registered office is at Malvern Hills Science Park, Geraldine Road, Malvern, Worcestershire WR14 3SZ;

**Whereas:**

- (A) The Assignor is the registered proprietor or applicant of the Patents.
- (B) The Assignor has agreed to assign the Patents to the Assignee.

**The parties agree that:**

**2. Interpretation**

- 2.1 In this Agreement, the following expressions shall have the following meanings:

"Patents" means the patents and patent applications whose details appear in Schedule 1 and any further patent or patent application which claims priority based thereon or is a divisional application or a continuation in part therefrom.

**3. Assignment**

- 3.1 In consideration of the payment to the Assignor by the Assignee of £1 (receipt of which is acknowledged), the Assignor does hereby assign with effect from 28 September 2001 with full title guarantee to the Assignee all of its rights, title and interest in and to the Patents including all statutory and common law rights attaching thereto and together with all rights of action for any acts of infringement having occurred before 28 September 2001, including the right to recover damages.

**4 Further Assurance**

- 4.2 The Assignor undertakes that, at the request of the Assignee, it will do all acts and things (including, without limitation, making declarations and oaths) and execute all documents that may be reasonably necessary under the law of any country for completing the transfer to the Assignee of the full right, title and interest to any of the rights assigned by clause 3.

**5 Grant Back**

- 5.1 The Assignee agrees upon written request from the Assignor and the Secretary of State for Defence to grant to the Assignor and the Secretary of State for Defence a royalty free licence to use the Patents for any defence purposes which are non-commercial.

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5.2 The Assignee agrees that the assignment by the Assignor of the Patents shall be subject to the Assignor's right to use the Patents as reasonably necessary to conduct research relating to other intellectual property rights owned, controlled or used by the Assignor.


5.3 The Assignee agrees to grant a non-exclusive licence on fair and reasonable commercial terms to third party nominees of the Assignor to use the Patents as reasonably necessary for purposes which relate to the development of applications for any Assignor owned technology which has been licensed to such third party nominees by the Assignor and the commercial exploitation thereof unless in the reasonable opinion of the board of the Assignee such licence would significantly harm the interests of the Assignee and the Assignor is so notified in writing by the board of the Assignee.

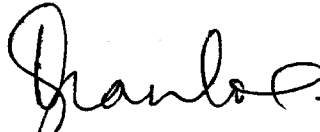
6. **Law and Jurisdiction**

6.1 This Agreement shall be governed by and construed in accordance with English law.

6.2 In respect of any dispute or disagreement arising under or in connection with this Agreement, each of the parties shall submit to the exclusive jurisdiction of the English Courts.


**IN WITNESS WHEREOF** the duly authorised representatives of the parties have signed this Agreement on the date first before written.


  
Signed by A O Bowdery )  
Director/Intellectual Property )  
For and on behalf of )  
QinetiQ Limited )


  
Signed by R. J. Scanlon )  
Chief Finance and Commercial Director )  
For and on behalf of )  
ZBD Displays Limited )

in the presence of:

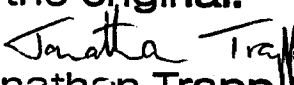
in the presence of:

  
witness

\_\_\_\_\_  
witness  
  
print name

  
print name

J. C. JONES

I certify this to be a true copy  
of the original.  
 9/1/03  
Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants



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of the original.  
*Jonathan Trapp* 9/1/03  
Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants



Case Number: 01P 2247

Title: Bistable nematic liquid crystal device

Ctry			4. <u>Sta</u> <u>tus</u>	Application No..	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	9402513.7	09-Feb-1994		
EP	W	PCT	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
GB	D	ORD	Pending	9502664.7	08-Feb-1995		
MY	D	ORD	Granted	PI 9500280	08-Feb-1995	MY-111821	31-Jan-2001
TW	D	ORD	Granted	84102509	16-Mar-1995	NI-125750	01-Jan-2001
WO	D	PCT	LAPSED	GB95/00179	30-Jan-1995		
JP	W	PCT	Pending	521033/95	30-Jan-1995		
GB	W	PCT	Abandoned	9616657.4	30-Jan-1995		
CA	W	PCT	Pending	2182962	30-Jan-1995		
CN	W	PCT	Granted	95192469.9	30-Jan-1995	95192469.9	26-Sep-1998
KR	W	PCT	Granted	96-704456	30-Jan-1995	321886	11-Jan-2002
US	W	PCT	Granted	08/693089	20-Sep-1996	5796459	18-Aug-1998
SG	D	ORD	Granted	9606351-6	08-Feb-1995	0075093	19-Dec-2000
BE	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
CH	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
DE	E	EPC	Granted	95907063.2	30-Jan-1995	69500922.2	22-Oct-1997
FR	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
ES	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
IT	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
NL	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997
GB	E	EPC	Granted	95907063.2	30-Jan-1995	0744041	22-Oct-1997

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*Jonathan Trapp* 9/1/03  
Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants

Case Number: 01P 2249

Title: Liquid crystal device alignment (polymer)

Ctry	Sub case		Status	Application No.	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	9402516.0	09-Feb-1994		
EP	W	PCT	Granted	95907061.6	25-Jan-1995	0744039	07-Jan-1998
GB	D	ORD	Pending	9502401.4	08-Feb-1995		
MY	D	ORD	Granted	PI9500279	08-Feb-1995	MY-111819	31-Jan-2001
TW	D	ORD	Granted	84102513	16-Mar-1995	NI-134664	27-Feb-2001
WO	D	PCT	LAPSED	GB95/00177	25-Jan-1995		
JP	W	PCT	Pending	521031/95	30-Jan-1995		
GB	W	PCT	Abandoned	9616658	30-Jan-1995		
CA	W	PCT	Pending	2182964	30-Jan-1995		
CN	W	PCT	Granted	95192465.6	30-Jan-1995	95192465.6	05-Sep-1998
KR	W	PCT	Granted	96-704458	30-Jan-1995	329695	11-Mar-2002
US	W	PCT	Granted	08/687494	06-Aug-1996	5724113	03-Mar-1998
SG	D	ORD	Granted	9604618-0	08-Feb-1995	79908	11-Dec-2001
CH	E	EPC	Granted	95907061.6	25-Jan-1995	0744039	07-Jan-1998
DE	E	EPC	Granted	95907061.6	25-Jan-1995	69501395.5	07-Jan-1998
ES	E	EPC	Granted	95907061.6	25-Jan-1995	0744039	07-Jan-1998
GB	E	EPC	Granted	95907061.6	25-Jan-1995	0744039	07-Jan-1998
NL	E	EPC	Granted	95907061.6	25-Jan-1995	0744039	

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*Jonathan Trapp*  
Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants

*9/1/03*

*MB*

Case Number: 01P 2275

Title: Liquid crystal alignment  
(ZBD)

Ctry	Sub Case		Status	Application No.	Filing Date	Patent No.	5. <u>Issue date</u>
GB	D	ORD	Lapsed	9502635.7	10-Feb-1995		
MY	D	ORD	Pending	PI96000462	08-Feb-1996		
TW	D	ORD	Granted	85100538	17-Jan-1996	NI152079	21-Mar-2002
WO	D	PCT	LAPSED	GB96/00107	22-Jan-1996		
EP	W	PCT	Granted	96900625.3	22-Jan-1996	0808476	09-Sep-1998
GB	W	PCT	Revoked	9715602.0	22-Jan-1996	2312523	07-Oct-1998
CA	W	PCT	Published	2212722	22-Jan-1996		
JP	W	PCT	Published	524051/96	22-Jan-1996		
KR	W	PCT	Granted	97-705458	22-Jan-1996	352548	30-Aug-2002
CN	W	PCT	Granted	96193027.6	22-Jan-1996	96193027.6	17-Apr-2002
US	W	PCT	Granted	08/875940	08-Aug-1997	5917570	29-Jun-1999
SG	W	PCT	Granted	9704847-4	22-Jan-1996	45871	20-Jul-1998
DE	E	EPC	Granted	96900625.3	22-Jan-1996	69600629.4	09-Sep-1998
FR	E	EPC	Granted	96900625.3	22-Jan-1996	0808476	09-Sep-1998
IT	E	EPC	Granted	96900625.3	22-Jan-1996	0808476	09-Sep-1998
NL	E	EPC	Granted	96900625.3	22-Jan-1996	0808476	09-Sep-1998
GB	E	EPC	Granted	96900625.3	22-Jan-1996	0808476	09-Sep-1998
HK	C	PCT	Published	98109826.4	22-Jan-1996		

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*Jonathan Trapp*  
Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants

9/1/03

*M. Baer*

Case Number: 01P 2424

Title: Bistable nematic liquid crystal device  
(ZBD)

Ctry	Sub Case		Status	Application No.	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	9521106.6	16-Oct-1995		
WO	D	PCT	LAPSED	GB96/02463	09-Oct-1996		
MY	D	ORD	Pending	PI96004294	16-Oct-1996		
IN	D	ORD	Pending	2240/DEL/96	15-Oct-1996		
EP	W	PCT	Granted	96932739.4	09-Oct-1996	0856164	28-Mar-2001
CN	W	PCT	Published	96197648.9	09-Oct-1996		
US	W	PCT	Granted	09/043788	30-Mar-1998	6249332	19-Jun-2001
KR	W	PCT	Granted	98-702760	09-Oct-1996	352052	27-Aug-2002
JP	W	PCT	Pending	9515581	09-Oct-1996		
GB	W	PCT	Granted	9802806.1	09-Oct-1996	2318422	21-Jul-1999
HK	C	PCT	Published	99100410.4	09-Oct-1996		
US	W1	PCT	Granted	09/740260	20-Dec-2000	6456348	24-Sep-2002
DE	E	EPC	Granted	69612295.2-0	09-Oct-1996	0856464	28-Mar-2001
ES	E	EPC	Granted	96932739.4	09-Oct-1996	0856164	28-Mar-2001
FR	E	EPC	Granted	96932739.4	09-Oct-1996	0856164	28-Mar-2001
IT	E	EPC	Granted	96932739.4	09-Oct-1996	0856164	28-Mar-2001
NL	E	EPC	Granted	96932739.4	09-Oct-1996	0856164	28-Mar-2001
AT	E	EPC	Granted	96932739.4	09-Oct-1996	E200154	28-Mar-2001
BE	E	EPC	Granted	96932739.4	09-Oct-1996	0856164	28-Mar-2001
CH	E	EPC	Granted	96932739.4	09-Oct-1996	0856464	28-Mar-2001
GB	E	PCT	Granted	9802806.1	09-Oct-1996	0856164	28-Mar-2001
US	W2	PCT	Pending	10/212141	06-Aug-2002		

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*Jonathan Trapp* 9/1/03  
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Solicitor (Scotland)  
Farnborough, Hants

*HZ*



Case Number: 01P 2630

Title: Bistable nematic liquid crystal device  
(ZBD)

Ctry	Sub case		Status	Application No.	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	9727142.3	24-Dec-1997		
WO	D	PCT	Published	GB98/03787	16-Dec-1998		
EP	W	ORD	Priority	98960042.4	16-Dec-1998		
CN	W	PCT	Published	98813789.5	16-Dec-1998		
GB	W	PCT	Granted	0013952.7	16-Dec-1998	2346978	05-Dec-2001
JP	W	PCT	Published	2000-526844	16-Dec-1998		
KR	W	PCT	Pending	10-2000-7007	16-Dec-1998		
US	W	PCT	Pending	09/581580	15-Jun-2000		
HK	W	PCT	Published	01103911.9	06-Jun-2001		

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*Jonathan Trapp* 9/1/03  
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Farnborough, Hants

*MB*

Case Number: 01P 2818

Title: Addressing bistable nematic liquid crystal devices  
(ZBD)

Ctry	Sub Case		Status	Application No.	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	9904704.5	03-Mar-1999		
WO	D	PCT	Lapsed	GB00/00723	02-Mar-2000		
EP	W	ORD	Published	00907759.5	02-Mar-2000		
CA	W	PCT	Pending	2365506	02-Mar-2000		
CN	W	PCT	Published	00807200.0	02-Mar-2000		
JP	W	PCT	Pending	2000-603015	02-Mar-2000		
KR	W	PCT	Pending	7011231	02-Mar-2000		
US	W	PCT	Pending	09/914854	01-Sep-1931		
HK	W	PCT	Published	02107168.9	27-Sep-2002		

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Solicitor (Scotland)  
Farnborough, Hants

*NTB 2003*

Case Number: 01P 2969

Title: Bistable Nematic Liquid Crystal Devices  
(ZBD)

Ctry	Sub case		Status	Application No.	Filing Date	Patent No.	Issue Date
GB	D	ORD	Pending	9928126.3	30-Nov-1999		
WO	D	PCT	Lapsed	GB00/04447	23-Nov-2000		
TW	D	ORD	Pending	89127554	21-Dec-2000		
EP	W	PCT	Published	00977689.9	23-Nov-2000		
CA	w	PCT	Pending	23-Nov-2000			
CN	W	PCT	Pending	00818733.9	23-Nov-2000		
IN	W	PCT	Pending	00642/MUM	23-Nov-2000		
JP	W	PCT	Pending	2001-542261	23-Nov-2000		
KR	W	PCT	Pending	10-2002-7006	23-Nov-2000		
SG	W	PCT	Pending	200202867-8	23-Nov-2000		
US	W	PCT	Pending	10/148273	23-Nov-2000		

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Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants

*MB*

Case Number: 01P 3153

Title: Multistable nematic liquid crystal device

Ctry	Sub Case		Status	Application No..	Filing Date	Patent No.	Issue Date
GB	D	ORD	Pending	0017953.1	21-Jul-2000		
MY	D	ORD	Pending	PI 20013449	20-Jul-2001		
TW	D	ORD	Pending	90117797	21-Aug-2001		
WO	D	PCT	Published	GB01/03168	18-Jul-2001		

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Solicitor (Scotland)  
Farnborough, Hants

*MT2/00M*

Case Number: 01P 3159

Title: Method of grating fabrication

Ctry	Sub Case		Status	Application No..	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	0018629.6	29-Jul-2000		
WO	D	PCT	Published	GB01/03305	25-Jul-2001		

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*Jonathan Trapp* 9/1/03  
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Farnborough, Hants

*MB*

Case Number: 01P 3170

Title: Addressing Multistable Nematic Crystal Devices

Ctry	Sub Case		Status	Application No..	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	0022055.8	07-Sep-2000		
MY	D	ORD	Pending	PI20014153	04-Sep-2001		
WO	D	PCT	Published	GB01/03956	05-Sep-2001		
TW	D	ORD	Pending	90121757	03-Sep-2001		

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*Jonathan Trapp* 9/1/03  
Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants

*NT 10/03*

**Invention Data**

02 December 2002

**Case Number:** 01P 3230

**Title:** Liquid Crystal Device (ZBD)

Ctry	Sub Case		Status	Application No.	Filing Date	Patent No.	Issue Date
GB	D	ORD	Lapsed	0114998.8	20-Jun-2001		
WO	D	PCT	Pending	GB02/02924	20-Jun-2002		

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of the original.**  
*Jonathan Trapp* 9/1/03  
**Jonathan Trapp  
Solicitor (Scotland)  
Farnborough, Hants**