

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5698845

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	EDWARD R. HOWORKA	11/01/2005
RECEIVING PARTY DATA		
Name:	NEX GROUP PLC	
Street Address:	2 BROADGATE	
City:	LONDON	
State/Country:	UNITED KINGDOM	
Postal Code:	EC2M 7UR	
PROPERTY NUMBERS Total: 1		
Property Type	Number	
Application Number:	11197329	
CORRESPONDENCE DATA		
Fax Number:		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
Email:	michelle.marsh@cmegroup.com, jpadalino@lsk-iplaw.com	
Correspondent Name:	LEMPIA SUMMERFIELD KATZ LLC	
Address Line 1:	20 S. CLARK STREET, SUITE 600	
Address Line 4:	CHICAGO, ILLINOIS 60603	
ATTORNEY DOCKET NUMBER:	004672-04561Y-US	
NAME OF SUBMITTER:	JAMES L. KATZ	
SIGNATURE:	/JAMES L. KATZ/	
DATE SIGNED:	09/03/2019	
Total Attachments: 6		
source=11-197329 Assignment#page1.tif		
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source=11-197329 Assignment#page6.tif		

WHEREAS, I, Edward R. Howorka, as assignor, has invented certain improvements in **Price Improvement In Electronic Trading System** or which an application for United States Letters Patent has been executed by us of even date herewith; and

WHEREAS, EBS Group Limited, 4th Floor, London Stock Exchange, 10 Paternoster Square, London, EC4M 7LS, United Kingdom, as assignee, is desirous of acquiring all right, title and interest in and to said invention and any Patent that may be granted therefor.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, I, as assignor, hereby sells, assigns and sets over to said assignee the entire right, title and interest for the United States and all other countries in and to said invention and the aforesaid application for Patent, all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States and all other countries, including all rights of priority from the filing of said application, and all rights for past infringement, and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said inventions or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for myself and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all divisional, continuation, reissue and other applications for Patent on said inventions and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said inventions, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to assist assignee, its successors, assigns and nominees to obtain patent protection for said invention in the United States and all other countries, the expenses incident to said applications to be borne and paid by said assignee.

Date: Nov. 1, 2005



Edward R. Howorka

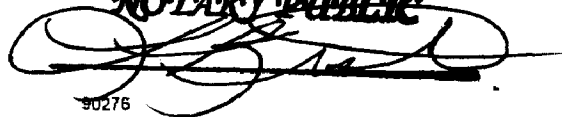
LEGALIZATION RECOMMENDED

Sworn to and subscribed

before me
this 1st day of November, 2005

by: LINDA KRSTEVSKI

NOTARY PUBLIC

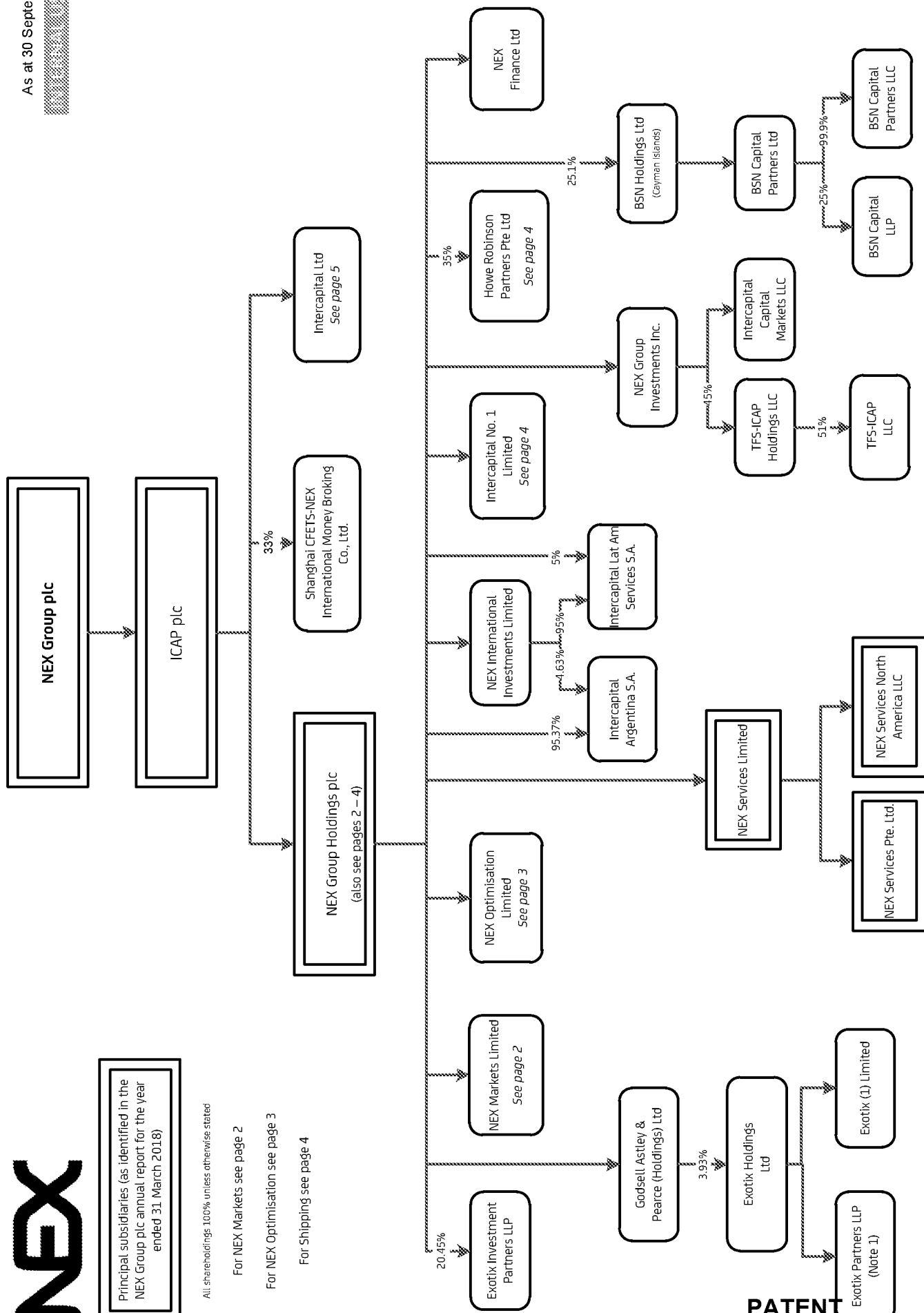

90276

LINDA KRSTEVSKI
NOTARY PUBLIC
STATE OF NEW JERSEY
MY COMM. EXP. 7-10-08



Principal subsidiaries (as identified in the NEX Group plc annual report for the year ended 31 March 2018)

As at 30 September 2018



All shareholdings 100% unless otherwise stated

For NEX Markets see page 2

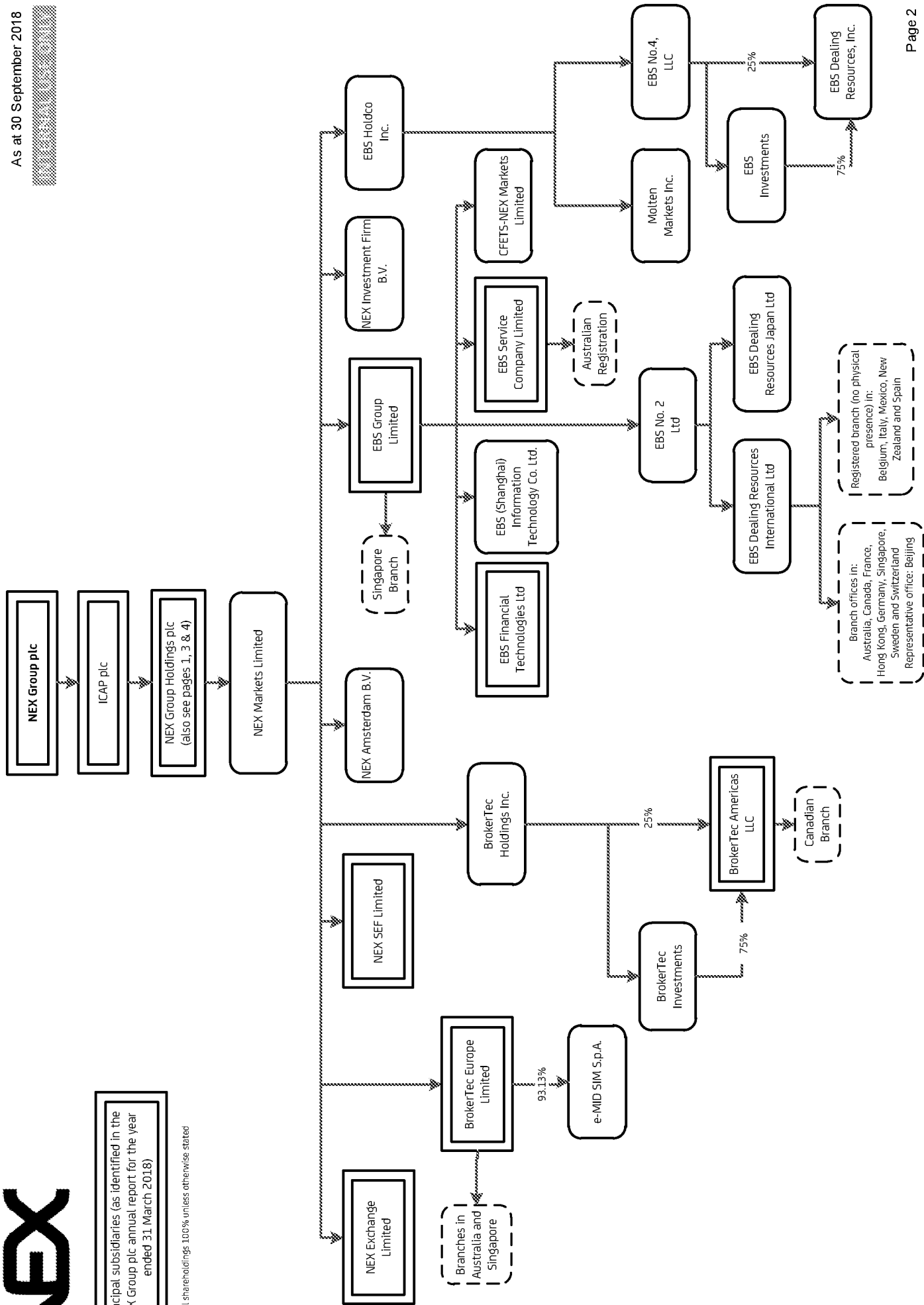
For NEX Optimisation see page 3

For Shipping see page 4

PATENT

REEL: 050250 FRAME: 0644

Note 1: Exotix Limited holds one capital point in Exotix Partners LLP on trust for Exotix Holdings Limited.

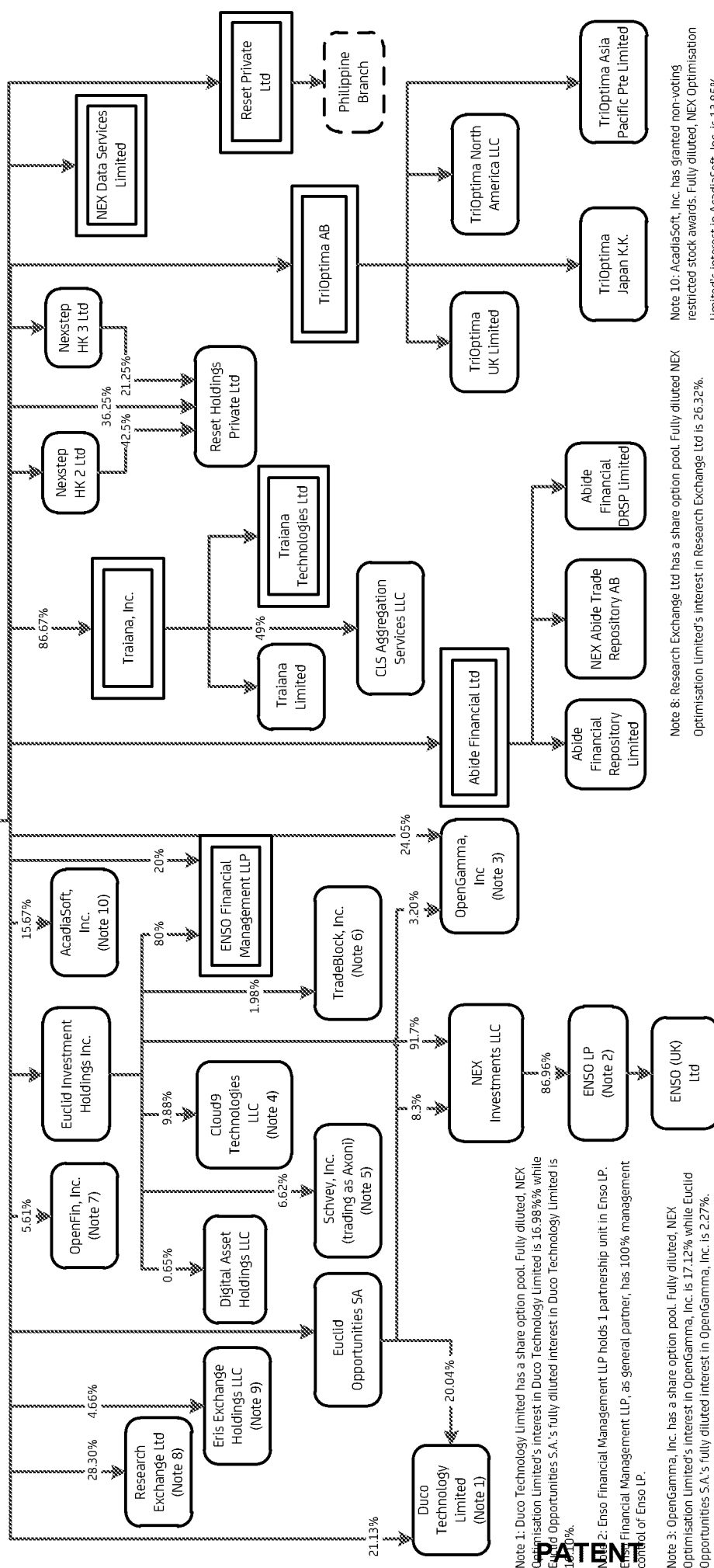
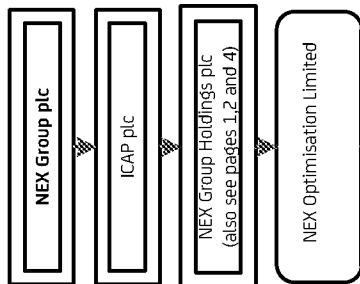




Principal subsidiaries (as identified in the NEX Group plc annual report for the year ended 31 March 2018)

All shareholdings 100% unless otherwise stated

As at 30 September 2018



Note 1: Duco Technology Limited has a share option pool. Fully diluted, NEX Optimisation Limited's interest in Duco Technology Limited is 16.98% while Euclid Opportunities S.A.'s fully diluted interest in Duco Technology Limited is 1.13%.

Note 2: ENSO Financial Management LLP holds 1 partnership unit in ENSO LP. ENSO Financial Management LLP, as general partner, has 100% management control of ENSO LP.

Note 3: OpenGamma, Inc. has a share option pool. Fully diluted, NEX Optimisation Limited's interest in OpenGamma, Inc. is 17.12% while Euclid Opportunities S.A.'s fully diluted interest in OpenGamma, Inc. is 2.27%.

Note 4: Euclid Investment Holdings Inc. has a 9.88% voting interest and a 8.88% economic interest in Cloud9 Technologies LLC.

Note 5: Schvey, Inc. has a share option pool. Fully diluted, Euclid Investment Holdings, Inc.'s interest in Schvey, Inc. is 5.96%

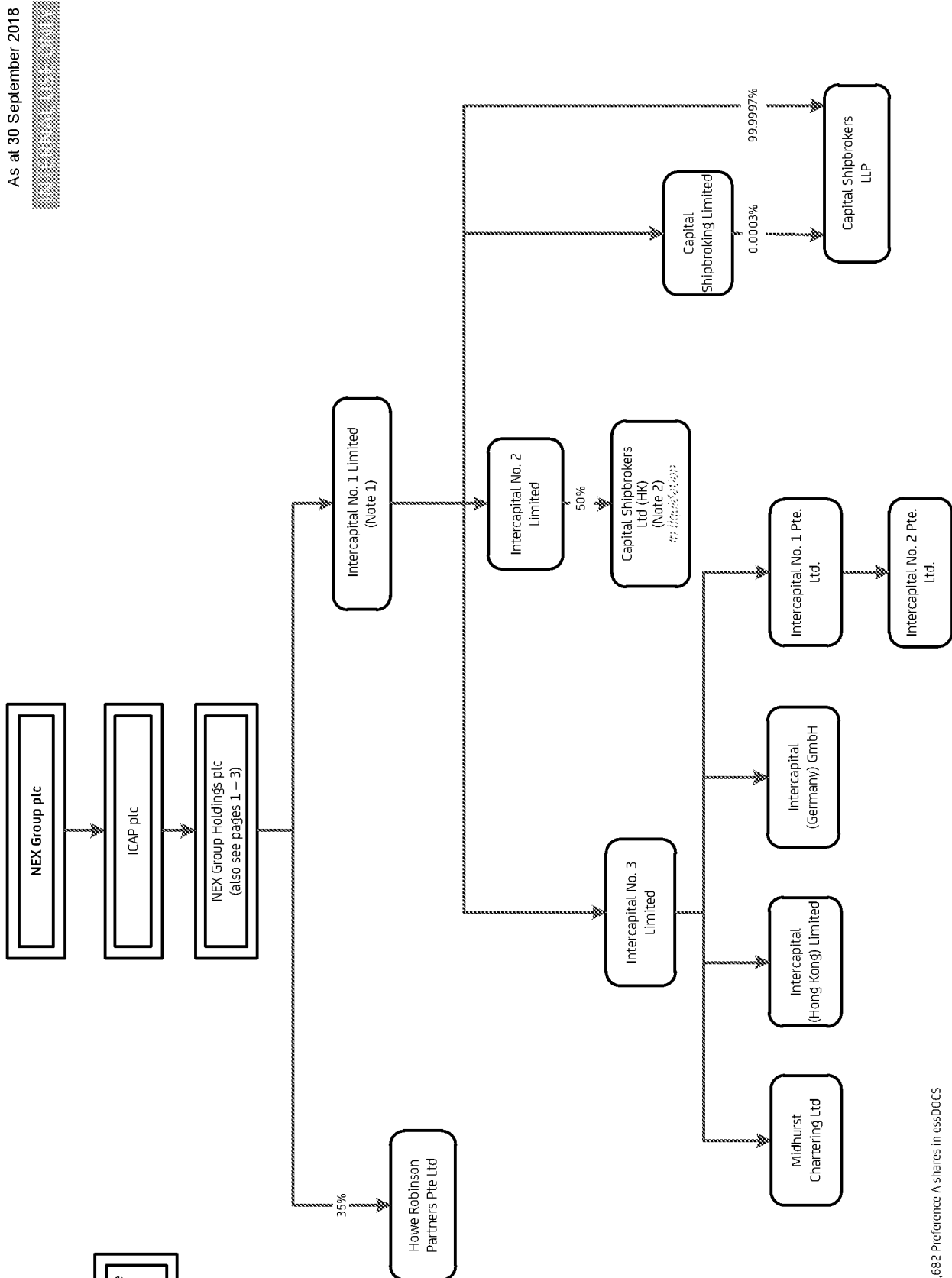
Note 6: TradeBlock, Inc. has a share option pool. Fully diluted, Euclid Investment Holdings, Inc.'s interest in TradeBlock, Inc. is 1.70%.

Note 7: OpenFin, Inc. has a share option pool. Fully diluted, Nex Optimisation Limited's interest in OpenFin, Inc. is 4.89%.

Note 8: Research Exchange Ltd has a share option pool. Fully diluted NEX Optimisation Limited's interest in Research Exchange Ltd is 26.32%.

Note 9: Eris Exchange Holdings, LLC has an equity incentive plan and stock reserved for liquidity providers. Fully diluted, NEX Optimisation Limited has a 4.09% interest in Eris Exchange Holdings, LLC.

Note 10: AcadiaSoft, Inc. has granted non-voting restricted stock awards. Fully diluted, NEX Optimisation Limited's interest in AcadiaSoft, Inc. is 13.85%.

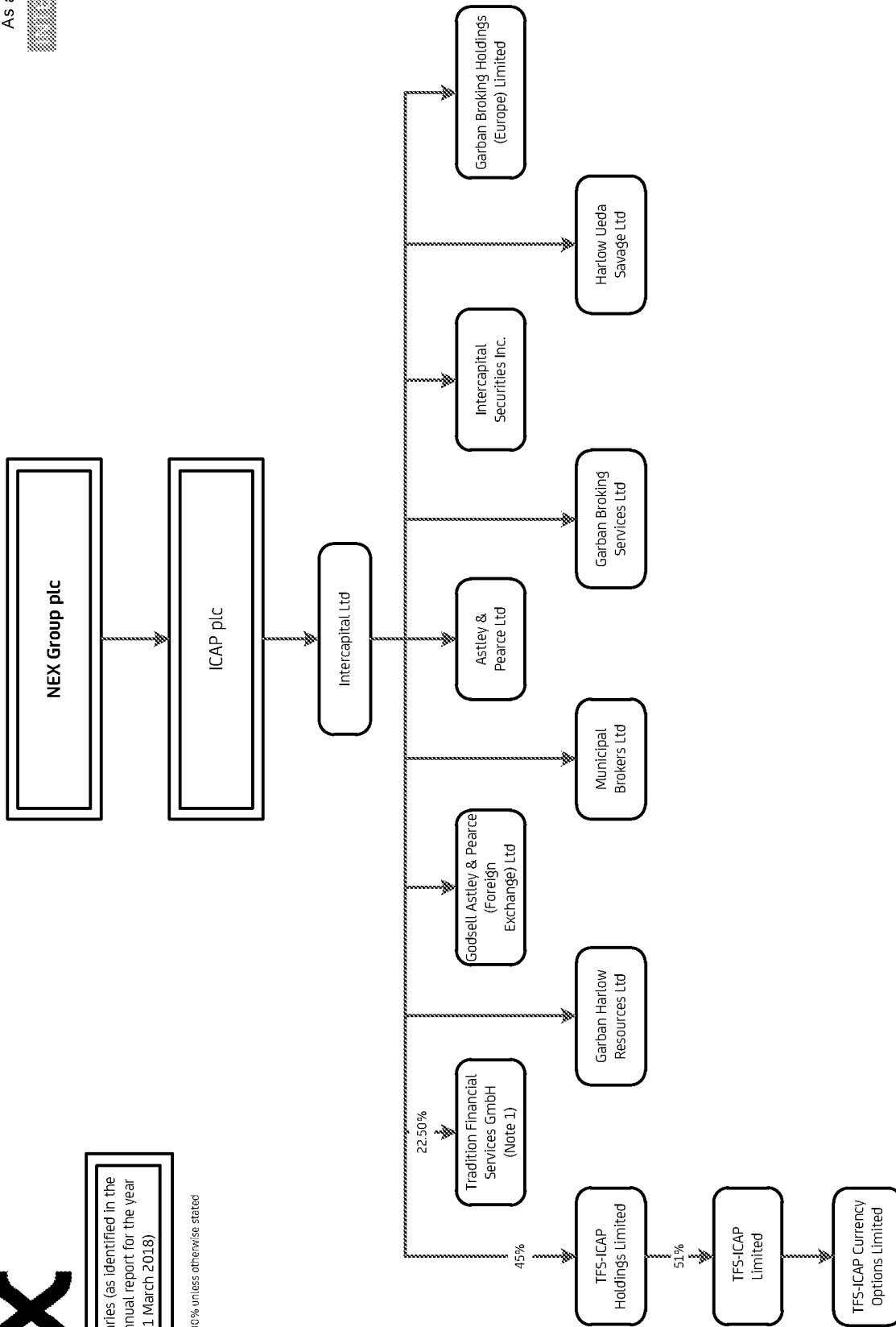


Note 1: Intercapital No. 1 Limited holds 11,682 Preference A shares in essDOCS Limited.

Note 2: Intercapital No. 2 Limited has 50% voting interest and 45% economic interest in Capital Shipbrokers Ltd.

Principal subsidiaries (as identified in the NEX Group plc annual report for the year ended 31 March 2018)

All shareholdings 100% unless otherwise stated



Note 1: Intercapital Limited has 33.33% nominal holding and 22.50% voting and economic interest in Tradition Financial Services GmbH.