THE COMPANIES ACT 1985

COMPANY LIMITED BY SHARES

MEMORANDUM and ARTICLES OF ASSOCIATION of

DYNAMICAL SYSTEMS RESEARCH LIMITED

INCORPORATED THE 12TH AUGUST 1993

COMPANY NUMBER 2844385

* As amended by a special resolution passed on 6^{th} April 2000

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The Companies Act 1985

COMPANY LIMITED BY SHARES

Memorandum of Association of

DYNAMICAL SYSTEMS RESEARCH LIMITED

- 1. The name of the Company is **DYNAMICAL SYSTEMS RESEARCH LIMITED**
- 2. The Registered Office of the Company will be situate in England.
- 3. The Objects for which the Company are established are:
- (a) To carry on, in conjunction with each other or as separate and distinct undertakings, all or any of the following businesses: manufacturers, imports, exporters, agents, dealers (both wholesale and retail) in all articles of commercial, manufacturing, personal and household use and consumption and in all kinds of raw materials; warehousemen; storage contractors; shipping and forwarding agents; manufacturers of and dealers in all types of equipment and machinery; dealers in property and estates; property developers and investors, property managers; to offer services of accountant, book-keeper or secretary; estate agents, insurance agents and brokers, financiers, financial agents and to act as nominee, trustee, agent, factor, broker, executor, administrator, receiver for or otherwise on behalf of Companies, Corporations, firms or persons, builders; scaffolders; contractors; sign makers; heating and ventilation engineers and contractors; refrigeration engineers, specialists and contractors; decorators; painters; bricklayers, carpenters; shuttering manufacturers and erectors; joiners, public works contractors; plasterers, plumbers, electricians, shop fronts fitters; carpet dealers and layers; builders and decorators' merchants; civil, mechanical, constructional, agricultural, consulting, heating, electrical and general engineers; architects; welders, sheet metal workers; double glazing and window consultants; blacksmiths, motor engineers; garage proprietors; car dealers; car hire service, taxi proprietors and operators; travel agents, tour operators, proprietors of vehicles and vessels of all kinds, transport and haulage contractors; general engineers; tool makers; booking agents for, and managers of, theatres, cinemas and all other kinds of entertainment and sporting events; turf and sporting accountants in all their branches; proprietors of shops, cafes, clubs, hotels and restaurants, catering contractors; dealers in foods and provisions of all kinds; wine and spirit merchants; butcher; grocers, greengrocers; fishmongers and poultry merchants; dealers in health foods; farmers; florists, horticulturists; bakers; confectioners; tobacconists; ironmongers; hardware merchants; dealers in plastic of all kinds, antique dealers; furniture, manufacturers and dealers; leather and fancy goods dealers; jewellers, radio television and electrical retailers; dealers and repairers, toys, games and sports equipment dealers; photographers and dealers in all kinds of photographic material and equipment, film producers and distributors; footwear; manufacturers; textile merchants, tailors, fashion designers, ladies and gentlemen's outfitters, clothing manufacturers, boot and shoe retailers, perfumery and cosmetic dealers, hairdressers; manufacturing and retail

chemists; medical suppliers; printers, publishers, stationers, advertising and publicity agents; public relation specialists, consultants, business transfer agents and employment agents; hire purchase and leasing operators; computer operators, programmers and dealers; video dealers, market research specialists; business advisers, mail order specialists; dyers and cleaners; dry cleaners, proprietors and launderettes, excavation and demolition contractors; locksmiths, security advisers, plant hirers, scrap iron and waste merchants and commodity traders and to carry on all or any of the said businesses, and provide services in connection therewith, either together as one business or as separate and distinct businesses, in any part of the world.

- (b) To carry on any other business which, in the opinion of the Company, may be capable of being conveniently or profitably carried on in conjunction with or subsidiary to any other business of the Company and is calculated to enhance the value of the Company's property or further its objects or any of them.
- (c) To purchase or by any other means acquire freehold, leasehold or any other property for any estate or interest whatever, movable or immovable, or any interest in such property and to sell, lease, let on hire, develop such property, or otherwise turn the same to the advantage of the Company.
- (d) To apply for, register or by other means acquire any patents, patent rights, brevets d'invention, licences, trade marks, concessions and inventions and to use and turn to account the same or to develop, sell or assign the same or grant licences or privileges in respect thereof or otherwise turn the same to the advantage of the Company.
- (e) To build, reconstruct or generally maintain buildings and works of all kinds, whether or not these are situate on the property of the Company.
- (f) To invest and deal with the monies of the Company in such shares or upon such securities and in such manner as from time to time may be determined.
- (g) To amalgamate with or to make any agreement or arrangement with or enter into partnership of joint purse agreement with any other company, firm or person carrying on business similar or complementary to the business of the Company or any part thereof.
- (h) To subscribe for, take, purchase or otherwise acquire either for cash, shares or debentures in this Company or any other consideration any other company or business which, in the opinion of the Company, may be carried on so as directly or indirectly to benefit the Company.
- (i) To sell or otherwise dispose of the whole or any part of the business or property of the Company for any consideration, shares or debentures as the Company may think fit.
- (j) To lend money to customers, associates and others both corporate and incorporate and to guarantee the observance and performance of obligations and contracts by customers and others.

- (k) To borrow or raise money in such manner as the Company thinks fit and secure the repayment thereof by the creation and issue of debentures, debenture stock, mortgages or in any other way.
- (l) To pay or remunerate any person, firm or company for rendering services to the Company in the promotion of the Company or the placing and issue of shares, debenture stock or other securities of the Company.
- (m) To support and subscribe to any funds and to subscribe to or assist in the promotion of any charitable, benevolent or public purpose or object for the benefit of the Company or its employees, directors or other officers past or present and to grant pensions to such persons or their dependants.
- (n) To draw, make, accept, endorse, discount and execute bills, warrants, notes or other negotiable or transferable instruments.
- (o) To assist in the promotion of or promote any company or undertaking which may appear likely to assist or benefit the Company and to place or guarantee the placing of, subscribe or underwrite or otherwise acquire any part of the stock, debentures, debenture stock or other obligations of such company.
- (p) To promote by way of advertising the Company's products and services in any manner and to reward customers or potential customers and to promote or take part in any scheme likely to benefit the Company.
- (q) To distribute in specie any of the shares, debentures or securities of the Company between the members of the Company in accordance with their rights.
- (r) To do all such other things as may be deemed incidental or conducive to the attainment of the above objects or any of them.

All the foregoing objects shall be read and construed as separate and distinct objects and the generality of any such objects shall not be abridged or cut down by reference to any other object of the Company.

- 4. The liability of the members is limited.
- 5. The share capital of the Company is £33,000 divided into 3,299,900 ordinary shares of 1p each and 100 "A" ordinary shares of 1p each.*
- * The share capital of the Company was increased by £32,000 by an ordinary resolution passed on 6 April, 2000.

WE, the several persons whose names, addresses and descriptions are subscribed are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in capital of the Company set opposite our respective names.

NAMES, ADDRESS AND DESCRIPTIONS OF SUBSCRIBERS	Number of shares taken by each subscriber
GERALD LEWIN 1 st Floor Offices 8-10 Stamford Hill London N16 6XZ	ONE
Company Registration Agent	
MICHAEL HOLDER 1 st Floor Offices 8-10 Stamford Hill London N16 6XZ	ONE
Company Registration Agent	

Dated this 10th day of July 1993

WITNESS to the above signatures-

VIVIENNE LEWIN 1st Floor Offices 8-10 Stamford Hill London N16 6XZ

Company Director

The Companies Act 1985

COMPANY LIMITED BY SHARES

Articles of Association of

DYNAMICAL SYSTEMS RESEARCH LIMITED (As amended by a special resolution passed on 6th April 2000)

PRELIMINARY

- 1. Subject as hereinafter provided, the regulations contained in Table A in the Companies (Tables A-F) Regulations 1985 (hereinafter referred to as Table A) shall apply to the Company.
- 2. Regulations 2, 3, 40, 64, 73-80 (inclusive), 94, 95, 96 and 99 of Table A aforesaid shall not apply to the Company, but the Articles hereinafter contained together with the remaining regulations of Table A, subject to the modifications hereinafter expressed, shall constitute the regulations of the Company.
- 3.1 The authorised share capital of the Company at the date of the adoption of this Article (inserted by special resolution of the Company on the date hereof) is £33,000 divided into 100 "A" ordinary shares of 1p each, and 3,299,900 ordinary shares of 1p each and the issued share capital at the date of the adoption of these Articles of Association is 31,900 ordinary shares of 1 pence each and 100 "A" ordinary shares and the rights attaching to the aforesaid classes of shares are as set out hereafter in this Article 3.

3.2 Rights Attaching to the Shares

The rights attaching to each class of shares in the capital of the Company are as follows:-

3.2.1 **Income**

The profits of the Company which are available for distribution and which the Company determines to distribute in respect of any financial year shall be distributed between the classes of shares as follows:-

319/320 to the holders of the ordinary shares

1/320 to the holders of "A" shares

subject thereto the appropriate proportion of every dividend shall be distributed amongst the holders of each class of shares rateably according to the amounts paid up or credited as paid up on the shares held by them

3.2.2 Capital

On a return of assets on a liquidation or otherwise, the assets of the Company remaining after the payment of its liabilities shall be distributed firstly by repayment of the par value of the ordinary shares to the extent that they are paid up or treated as paid up and any surplus thereafter shall be distributed between the classes of shares in the following proportions:

319/320 to the holders of ordinary shares

1/320 to the holders of "A" shares

subject thereto the appropriate proportion of such assets shall be distributed amongst the holders of each class of shares rateably according to the amounts paid up or credited as paid up on the shares held by them

3.2.3 Voting rights

Every Member present in person shall upon a show of hands have one vote and upon a poll there shall be as 3.3 million votes exercisable either in person or by proxy which shall be divided between the classes of shares in the following proportions:

319/320 to the holders of the ordinary shares

1/320 to the holders of "A" shares

subject thereto the appropriate number of votes shall be divided between the shareholders of each class rateably according to the number of shares of that class held by them (fractional entitlements being disregarded)."

- 3.3 Each ordinary share (but not an "A" share) shall confer up on its holder the right to participate in dividends declared by the Company where such dividends are accompanied by an option for the holder to elect to forego his right to such cash dividend and to receive instead an issue of shares of the same class equal to or less than the amount of the dividend, in accordance with article 5 B.
- 4. The shares of the Company, whether forming part of the original capital or of any increased capital, may be alloted or otherwise disposed of to such persons and for such consideration and upon such terms as the Directors may determine subject, in the case of any shares forming part of any increased capital, to such directions as to the allotment or disposal thereof as may be given by the Company in general meeting at the time of the creation of such shares and subject also to the provisions of Regulation 2 in Table A.

CLASS RIGHTS

5A.1 If at any time the share capital is divided into different classes of shares, the rights attaching to any class (unless otherwise provided by the terms of issue of the shares of that class) may, subject to the provisions of section 125 of the Companies Act 1985, and whether or not the Company is being wound up, be varied or abrogated only with the consent in writing of the holders of three-quarters of the issued shares of that class, or with the sanction of an extraordinary resolution passed at a separate general meeting of the holders of the shares of that class.

5A.2 To every such separate general meeting the provisions of these articles relating to general meetings shall apply *mutatis mutandis*, except that the necessary quorum shall be one or more persons holding or representing by proxy one-third of the issued shares of the class (but so that if at any adjourned meeting of such holder or holders a quorum is not present, the holder or holders present shall form a quorum), and any holder of shares of the class present in person or by proxy may demand a poll.

SCRIP DIVIDENDS

- 5B.1 The Directors may with the sanction of the shareholders in general meeting determine at the same time as they declare any cash dividend on the fully paid shares that each holder of ordinary shares shall have the option to elect to forgo his right to share in all or part of such cash dividend and to receive instead an issue of shares of the same class as those held by him credited as fully paid and having a value (actual or nominal) greater than, equal to or less than the amount of the dividend.
- 5B.2 If the Directors determine to allow such option in relation to any dividend each holder of fully paid shares conferring a right to share in such dividend and to whom such option is made available may by notice in writing to the Company ("a Notice of Election", given in such form and within such period as the Directors may from time to time determine) elect to forgo the dividend which otherwise would have been paid to him in cash on such distribution on so many or all of the shares conferring a right to share in such distribution as he shall specify both as to number and as to class in the Notice of Election and to receive in lieu a number of additional shares of the same class as those specified to be allotted to him credited as fully paid, on such basis as the Directors may determine.
- 5B.3 The Directors may stipulate that no shareholder shall be entitled to elect as aforesaid if his holding of shares is such that if he elected in respect of the whole of such holding he would be entitled to be allotted less than one share.
- 5B.4 Following the receipt of a Notice or Notices of Election pursuant to paragraph 2 of this Article the Directors shall appropriate out of the undistributed profits or reserves of the Company (including share premium account or capital redemption reserve) such amount as they shall determine and apply the same in paying up shares of the relevant class to be allotted credited as fully paid to those holders of shares who have given Notices of Election as aforesaid ("the Electing Shareholders"), such shares to be allotted and distributed as credited as fully paid up to the Electing Shareholders in the proportions that the Directors shall so determine. The shares allotted to Electing Shareholders shall rank in full for all dividends on the shares declared or paid after the date of allotment thereof (other than the dividend which shareholders have elected to forego in consideration of such allotment) and in all other respects shall form one uniform class with the relevant class of fully paid shares of the Company in issue (if any) at the time of allotment.

- 5B.5 The Directors will not exercise the power conferred on them by paragraph 1 of this Article unless in their opinion the Company has sufficient undistributed profits or reserves to give effect to any elections in respect thereof which could be made under the terms of this Article.
- 5B.6 The powers given to the Directors by this Article are additional to the provision for capitalisation of profits provided for by regulation 128A of Table A.
- 6. Subject to the provisions of the Act any Preference Shares may be issued on the terms that they are, or at the option of the Company are liable to be redeemed.

TRANSFER OF SHARES

7. Any share may be transferred by a member to his or her spouse or lineal descendant and any share of a deceased member may be transferred to any such relation as aforesaid of the deceased member. Save as aforesaid the Directors, in their absolute discretion and without assigning any reason therefor, may decline to register the transfer of any share whether or not it is a fully paid share. The first sentence of Regulation 24 shall not apply to the Company.

DIRECTORS

- 8. No person shall be appointed a Director at any general meeting unless:-
 - (a) he is recommended by the Directors; or
 - (b) not less than fourteen nor more than thirty-five clear days before the date appointed for the meeting, notice executed by a member qualified to vote at the meeting has been given to the Company of the intention to propose that person for appointment stating the particulars that would, if he were so appointed, be required to be included in the Company's register of Directors together with notice executed by that person of his willingness to be appointed.
- 9. Subject as aforesaid, the Company may by ordinary resolution appoint a person who is willing to act to be a Director either to fill a vacancy or as an additional Director.
- 10. The Directors may appoint a person who is willing to act to be a Director, either to fill a vacancy or as an additional Director, provided that the appointment does not cause the number of Directors to exceed any number fixed by or in accordance with the articles as the maximum number of Directors. A Director so appointed shall hold office only until the next following annual general meeting but shall be eligible for reappointment at such annual general meeting. If not so reappointed he shall vacate office at the conclusion thereof.
- 11. A Director who has disclosed his interest in accordance with Regulations 85 and 86 of Table A and the provision of any Act may vote in respect of any contract, proposed contract or any arrangement in which he is interested directly or indirectly and such Director shall be counted in the quorum at any meeting at which such contract or proposed contract or arrangement is being considered.

- 12. A Director may hold any other office or place of profit under the Company (other than the office of Auditor) in conjunction with his office of Director for such period and on such terms (as to remuneration and otherwise) as the Directors may determine.
- 13. Any Director may act by himself or his firm in a professional capacity for the Company, and he or his firm shall be entitled to remuneration for professional services as if he were not a Director provided that nothing herein contained shall authorise a Director to act as Auditor for the Company.
- 14. The Company shall not subject to Section 293 of the Act, and accordingly any person may be appointed or elected as a Director whatever his age, and no Director shall be required to vacate his office of Director by reason of his attaining or having attended to age of seventy years or any other age.

BORROWING POWERS

15. The Directors may exercise all the powers of the Company to borrow many and to mortgage or charge its undertaking, property and uncalled capital, or any part thereof, and, subject to Section 80 of the Act, to issue debentures, debenture stock, and other securities whether outright or as security for any debt, liability or obligation of the Company or of any third party.

SECRETARY

16. The Secretary shall be appointed by the Directors for such term, at such remuneration and upon such conditions as they may think fit, and any Secretary so appointed may be removed by them. If at any time there shall be no Secretary or for any reason no Secretary capable of acting, the Directors may appoint an assistant or deputy Secretary.

DIRECTORS

- 17. The first Director or Directors of the Company shall be the persons named in the statement delivered under Section 10 of the Act.
- 18. Unless and until otherwise determined by the Company in General Meeting the number of Directors (other than alternate directors) shall not be less than one. If any time and from time to time there shall be only one Director (other than alternate directors) of the Company such Director may act alone in exercising all the powers, discretions and authorities vested in the Directors, and regulation 89 in Table A shall be modified accordingly.

SECRETARY

19. The first Secretary of the Company shall be the person named in the statement delivered under section 10 of the Act.

NAMES, ADDRESS AND DESCRIPTIONS OF SUBSCRIBERS

GERALD LEWIN 1st Floor Offices 8-10 Stamford Hill London N16 6XZ

Company Registration Agent

MICHAEL HOLDER 1st Floor Offices 8-10 Stamford Hill London N16 6XZ

Company Registration Agent

Dated this 10th day of July 1993

WITNESS to the above signatures-

VIVIENNE LEWIN 1st Floor Offices 8-10 Stamford Hill London N16 6XZ

Company Director