

# International wavelength services from London to Chicago



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### Operational Requirement

This document and the information it contains are provided solely for the purpose of allowing potential suppliers to provide a tender for the services being procured. It is issued under the Open Procedure of the EU Services Directive.

Any supplier wishing to submit a proposal must register its intent with UKERNA before submitting the proposal. UKERNA will not accept proposals from suppliers who have not registered according to the procedure described in this document.

**UKERNA will not accept any registrations after 11<sup>th</sup> December 2006.**

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Authorised	Name: T Kidd Position: Head of Operations	Signature:  Date:
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## 1. INTRODUCTION

This document is the *Operational Requirement (OR)* for international wavelength services between the UKLight point of access in London and the StarLight facility in Chicago, USA.

The procurement process will be managed according to the open procedure as specified by the European Procurement Services Directive, 2004/18/EC, and this document is an integral part of the open procurement announced by UKERNA in the Supplement to the Official Journal of the European Union.

### 1.1 The Contracting Authority and the Procurement Agent

The contracting authority and procurement agent for this procurement is the JNT Association trading as UKERNA (United Kingdom Education and Research Networking Association).

### 1.2 JANET

JANET is the wide-area network that was created in 1984 to serve the needs of the higher education and research sector in the United Kingdom.

JANET provides services to all Higher Education Institutions, Further Education Colleges and Research Council establishments in the UK. The network also provides services to Adult and Community Learning and Specialist Colleges, Schools Networks and various research institutes. JANET has grown from an X.25 based network in 1984 connecting 50 sites, to an IP based network today with more than 1000 direct connections available to a community of 18 million users. "SuperJANET" is the name given to the national core backbone of JANET, which currently operates at 10Gbit/s, with access links at mostly 2.5Gbit/s to 19 regional networks. The regional networks operate under contract to UKERNA to deliver JANET to Higher Education Institutions, Further Education Colleges and Research Council establishments. The current version of the backbone is SuperJANET4. The rollout of its successor, SuperJANET5, is underway and will be completed by the end of 2006.

The JNT Association, trading as UKERNA, is responsible for providing JANET through a service level agreement with the Joint Information Systems Committee (JISC) of: the Higher Education Funding Council for England; the Learning and Skills Council; the Scottish Higher Education Funding Council; the Scottish Further Education Funding Council; the Higher Education Funding Council for Wales; the National Council for Education and Training for Wales; and the Department for Employment and Learning in Northern Ireland.

## 2. OVERVIEW OF THE FACILITIES REQUIRED

The UKLight facility in the UK enables researchers to join several other leading networks in the world creating an international experimental testbed for optical networking. UKLight brings together leading-edge applications, Internet engineering for the future, and optical communications engineering.

The existing contract for the UKLight 10Gbit/s wavelength between London and StarLight in Chicago will expire at the end of February 2007 and UKERNA wishes to procure this service.

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For the purposes of this invitation to tender a wavelength service will be defined as a circuit supplying a framed data transport service provided over a single wavelength or sequence of wavelengths within a supplier's infrastructure. This circuit is required to be maximally transparent as UKERNA will connect its own SDH switching and multiplexing equipment at the termination points.

### Addresses of the locations of the StarLight and UKLight facilities.

StarLight	UKLight
Abbott Hall 2 <sup>nd</sup> Floor Communications Center NPA.NXX 312-503 710 North Lake Shore Drive Chicago, Illinois 60611 USA	Room 1S <b>Telecity</b> 8-9 Harbour Exchange London E14 9GBUK

**Note:** If a supplier wishes to conduct a site survey at either of these locations, it must contact UKERNA first.

### 3. PROCUREMENT PROCEDURE

#### 3.1 General Issues

All formal communication with suppliers over the course of the procurement will be handled or arranged by UKERNA.

Responses to this OR will be accepted from any supplier, providing it conforms to the requirements defined in this section 3.

#### 3.2 Registration

Suppliers are required to register their intention to submit a proposal. Each registration will be acknowledged with a printed copy of this document and allocated a registration number that should be quoted in the tender document and in any other correspondence.

Suppliers shall register their intention to bid by sending, to the address below, a request for "International Wavelength Services as announced in the EU Journal" by fax or letter on official headed notepaper or by email. Suppliers are asked to register as soon as they start to consider a response to this invitation to tender. In any case, suppliers **must** register before a proposal will be accepted.

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Procurement Co-ordinator UKERNA Atlas Centre Chilton, Didcot Oxfordshire OX11 0QS UK	Telephone: +44 (0)1235 822 341 Fax: +44 (0)1235 822 286 E-mail: <a href="mailto:Procurement@ukerna.ac.uk">Procurement@ukerna.ac.uk</a>
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### 3.3 Electronic copy

An electronic copy of this OR is available on the World Wide Web at the URL <http://www.ja.net/latest/itt/UKLightwave>

### 3.4 Clarifications on the requirements

Suppliers will be provided with clarification of UKERNA's requirements in accordance with the EU directives on procurement.

Suppliers should raise any issues of clarification with the Procurement Co-ordinator whose contact details are given in section 3.2 above. Where issues of clarification arise which are relevant to more than one supplier, these will be posted on the web site at the URL:

<http://www.ja.net/latest/itt/UKLightwave>

and sent by e-mail to each registered supplier. Suppliers should submit all clarification requests by 11<sup>th</sup> December 2006 because UKERNA will not answer any clarifications that are submitted after this time.

### 3.5 Timetable

The steps and timetable for this procurement are as follows:

Activity	Date
Notice to European Journal	26 <sup>th</sup> October 2006
Final date for registration	11 <sup>th</sup> December 2006
Final date for clarifications	11 <sup>th</sup> December 2006
Closing date for tenders	12:00 Noon on 18 <sup>th</sup> December 2006
Selection of preferred supplier	10 <sup>th</sup> January 2007
Contracts placed by	31 <sup>st</sup> January 2007
Delivery of Service	1 March 2007

UKERNA reserves the right to vary this timetable if the need arises, within the constraints of the EU Services Directive.

Tenders will be expected to remain valid for six months after tender submission.

UKERNA may invite suppliers to attend tender clarification meetings if required.

### 3.6 Evaluation

The contract will be awarded on the basis of the offers that are the most economically advantageous. The main criteria to be used in determining which offers are the most economically advantageous will be:

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- the supplier's ability to meet the mandatory requirements;
- UKERNA's assessment of the supplier's ability to provide the wavelength on a timely basis based on the responses to the mandatory and information requirements; and
- Capital and recurrent costs.

UKERNA reserves the right not to award a contract.

### 3.7 Delivery of tenders

All copies of the tender documents, on paper and electronically, must be delivered on or before 12:00 Noon on the date specified in 3.5 Timetable above and to the contact listed in section 3.2.

**ONE paper copy and 4 electronic copies** of the tender on CD-ROM are required and must be sealed and clearly marked "**International Wavelength Services**". The electronic copies should be provided in PDF format with the exception of spreadsheets that should be provided in Excel 97 or 2000. Any non-standard fonts used in electronic submissions must be embedded in the document.

All tenders must be returned in a plain envelope that does not identify the supplier on it. Any tender that identifies the supplier on the label will be deemed invalid.

Delivery of the tender by FAX is **not** acceptable.

Tenders submitted after the deadline will **not** be considered.

### 3.8 Format of tenders

The response to the specific requirements must take the following format:

#### **A. Management Summary**

This section should be a single page summary describing the main points of the bid.

#### **B. Description of Services Proposed**

This section must describe the services proposed. The information required to satisfy all the specific requirements must be provided in this section.

The response must address all the requirements both Mandatory Requirements (MR) and Information Requirements (IR) detailed in all sections of this OR.

The order of replies to requirements (MR and IR) must be given in the same numerical order as they are stated in this document. The reference number and the text of the requirement to which it relates must precede each response.

### 3.9 Document notation

*MR<sub>n</sub>* A mandatory requirement.

A solution that does not meet all mandatory requirements will not be acceptable.

Suppliers must state how all requirements will be met, considering the issues and the points raised. **A statement of the form 'this requirement will be met' is not sufficient. Tenders must satisfy all mandatory requirements.** Failure to satisfy a mandatory requirement will exclude a tender from further consideration.

*IR<sub>n</sub>* An information requirement

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It is vital that suppliers provide full information on specific topics. These topics are identified as information requirements. Failure in a tender to provide full, relevant information in answer to information requirements may prevent the evaluation from being conducted properly, and hence lead to exclusion of the tender. Assessment of the quality of the tender will be based on the responses to these requirements, and will influence the selection process.

### 3.10 Freedom of Information

UKERNA is subject to the provisions of the Freedom of Information (FOI) Act. If a supplier considers that any information supplied by them is either commercially sensitive or confidential in nature, this should be highlighted and the reasons for the sensitivity given. In such cases, the relevant material will in response to FOI requests be examined in the light of the exemptions provided in the FOI Act.

## 4. REQUIREMENTS FOR EVIDENCE OF COMPETENCE TO SUPPLY

### 4.1 Financial and Economic Standing

*MR1.....The supplier shall warrant that none of the following circumstances set out in Article 45 of EU directive 2004/18/EC applies to the supplier:*

- *{item (2(a)) is bankrupt or is being wound up, where his affairs are being administered by the court, where he has entered into an arrangement with creditors, where he has suspended business activities or is in any analogous situation arising from a similar procedure under national laws and regulations;*
- *{item 2(b)} is the subject of proceedings for a declaration of bankruptcy, for an order for compulsory winding-up or administration by the court or for an arrangement with creditors or of any other similar proceedings under national laws or regulations;*
- *{item 2(g)} is guilty of serious misrepresentation in supplying the information required under this section or has not supplied such information.*

*MR2.....The supplier must provide evidence of financial and economic standing, as specified in Article 47 of EU directive 2004/18/EC using any or all of the methods described in paragraph 1 of Article 47.*

### 4.2 Technical Capability and Experience

*MR3.....The supplier must provide evidence of skills, experience and reliability as specified in the following areas taken from paragraph 2 of Article 48 of EU directive 2004/18/EC:*

- *{item (a) of paragraph 2 (ii)} a list of the principle deliveries effected or the main services provided in the past three years, with the sums, dates and recipients, whether public or private, involved. Evidence of delivery and services provided shall be given – where the recipient was a contracting authority, in the form of certificates issued or countersigned by the competent authority; where the recipient was a private purchaser, by the purchaser's certification or, failing this, simply by a declaration by the economic operator;*
- *{item (c) of paragraph 2} a description of the technical facilities and measures used by the supplier or service provider for ensuring quality and the undertaking's study and research facilities;*

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- *{item (h) of paragraph 2} a statement of the tools, plant or technical equipment available to the service provider or contractor for carrying out the contract;*
- *{item (i) of paragraph 2} an indication of the proportion of the contract which the services provider intends possibly to sub-contract.*

*MR4.....A description of the service provider's measures for ensuring quality as indicated in article 49 of 2004/18/EC. For this item, a copy of the supplier's ISO 9000 certificate will be adequate. If the supplier is not registered under ISO 9000, then a brief description of the policy used to ensure quality will be acceptable.*

*IR5.....The supplier is invited to supplement the information above with a brief description of its general capability to provide the services being offered.*

### 5. REQUIREMENTS FOR THE OFFERED SERVICE

#### 5.1 Contract Form

It is expected that UKERNA's standard form of contract will provide the starting point for any agreement.

Documents will have the following decreasing order of priority in determining resolution of any conflicts once a contract is in place:

1. The body of the contract
2. The schedules to the contract including UKERNA's standard Terms and Conditions;
3. The supplier's response to this OR, as modified by any written clarifications and amendments;
4. Ancillary information supplied with the supplier's response

*MR6.....The supplier must indicate that it will accept a contract under English law, and the principle and order of the document priority listed above.*

#### 5.2 Detailed Technical Requirements

*MR7..... The wavelength service shall provide a capacity of 10Gbit/s and be presented with STM-64 framing at both termination points.*

*MR8..... The wavelength service shall be maximally transparent. This means that there should be complete end-to-end transparency of the overhead bytes at the SDH path level and maximum transparency at the regenerator and multiplex section levels where it is recognised that certain bytes may be required for framing and management purposes, but all other bytes should be available for use by the end systems. Suppliers should provide complete information on how all section overhead bytes (both multiplex and regenerator sections) would be treated within their infrastructure, emphasising any bytes which are not transparent from end-to-end. This information should be presented in a tabular format which is a recognisable representation of the bytes within the STM-N frame structure such as Fig 6-6 in ITU-T G.707/Y1322 (10/2000) or similar. Suppliers should note in particular that UKERNA wishes to have transparent access to all user channel (F1), engineering order-wire (E1-2), and data communication channel (D1-12) bytes.*

*MR9..... Bit error rates shall be maintained at  $10^{-12}$  or better (smaller) at all times. Suppliers shall state the bit error rate to which they are prepared to commit and describe the monitoring and reporting mechanisms in place to maintain this quality.*

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MR10..... *Suppliers shall provide full details of the geographic path proposed for the circuit. This description must include a network topology map, which may be supported by additional information indicating all points at which the circuit is acted upon (e.g. amplification, regeneration and patching points).*

MR11.....*The supplier shall provide the wavelength service to demarcation points meeting the following requirement and no supplier's equipment shall be installed in UKERNA racks.*

*At the London end:*

*\* The circuit will be terminated in an existing ODF in UKERNA's suite 1S at Telecity. These ODF have single mode SC/PC connectors.*

*\* the optical power levels at that ODF shall meet the STM-64 SR-1 standards in G691 I-64.1. An allowance of 3dB loss in the patch cable connected to the UKERNA equipment from the demarcation point should be made eg the minimum receive power should be 3dB above that specified in the standard.*

*At the Chicago end:*

*\* The circuit will be terminated in an ODF not more than 10m from the UKERNA equipment at Starlight. The ODF shall have single mode SC/PC connectors.*

*\* The optical power levels at that ODF shall meet the STM-64 SR-1 standards in G691 I-64.1. An allowance of 3dB loss in the patch cable connected to the UKERNA equipment from the demarcation point should be made eg the minimum receive power should be 3dB above that specified in the standard.*

IR12..... *The supplier shall describe where their active equipment is located at each end and how they would propose to provide the connectivity from their active equipment to the demarcation point at both ends.*

IR13 *The supplier shall state the expected availability of the circuit measured over a rolling 12 month period and meantime to repair of faults. The supplier shall also state the level of availability and meantime to repair to which they are prepared to commit for contractual purposes.*

MR14.....*The supplier shall place no restriction on UKERNA's use of the facilities provided, other than those which arise from statutory requirements.*

MR15.....*The supplier shall provide UKERNA with a means of reporting problems with the service supplied. This reporting system shall be available 24 hours a day, every day of the year. The minimum requirement is that it should be possible to report a fault by telephone and that this report be acknowledged within 15 minutes.*

IR16..... *The supplier shall provide a full description of the fault management process. Details should include descriptions of the fault tracking systems and procedures and details of proactive monitoring and management systems in use.*

IR17..... *The supplier shall state if it provides a customer network management interface and, if so, its capabilities and the mechanism by which it will be made available for use by UKERNA*

MR18..... *The supplier shall provide quarterly reports on its fault management performance, including as a minimum the number and nature of the faults incurred during the period, and the time to restore service after each fault was reported.*

IR19..... *The supplier shall give details of the mechanisms by which routine maintenance will be carried out, the times at which such sessions will normally be scheduled and the period of notice that will be given.*

IR20. *Suppliers shall provide information on any properties of its proposed equipment that may have safety implications, e.g. microwave or laser radiation. Suppliers should state what precautions would need to be taken, or operational procedures adopted, by institutions or organisations where equipment is sited.*

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## 5.3 Delivery and acceptance

MR21..... *The supplier shall deliver (i.e. install and prove operability of) the offered circuit by 1<sup>st</sup> March 2007 providing that a contract is in place by the 31<sup>st</sup> January 2007.*

MR22..... *The supplier shall provide details of the procedures for establishing successful working of the circuit and be prepared to provide test results to UKERNA.*

MR23..... *Suppliers shall produce a plan, which includes timescales, for delivery, installation and acceptance testing, demonstrating how they can provide the circuit within the timescales.*

## 6. COSTS

### 6.1 Contract Term

In view of the rapid changes in the marketplace at the current time, UKERNA envisages an initial one year contract term, with the possibility of extension based on a market and technology review for upto a further two years on an annual basis .

MR24..... *The supplier shall provide pricing for the service specified in this OR. All prices must be provided in sterling and be shown **without** the addition of VAT.*

*All charges to UKERNA must be included in this response. Any charges not included here will be deemed to have been waived.*

### 6.2 Payment Regime

The supplier is expected to send UKERNA quarterly invoices from the commencement date.

## 7. FREEDOM OF INFORMATION (FOI)

UKERNA is subject to the provisions of the Freedom of Information (FOI) Act. If a supplier considers that any information supplied in a response to this Operational Requirement document is either commercially sensitive or confidential in nature, this should be highlighted and the reasons for the sensitivity given. In such cases, the relevant material will in response to FOI requests be examined in the light of the exemptions provided in the FOI Act.

MR25..... *Suppliers must highlight any information that is either commercially sensitive or confidential in nature and reasons for the sensitivity should be given.*

MR26..... *Suppliers must provide contact details (name, telephone number and email address) of the person within their organisation that is responsible for dealing with FOI requests.*