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Electrical
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6740

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BK/RMD/rv/New/IP.26416

IN/PCT

17/9/2004

The Controller of Patents
The Patent Office
DELHI

INDIA DESIGNATED AND ELECTED

Dear Sir,

Re: INTEL CORPORATION
NATIONAL PHASE APPLICATION CORRESPONDING
TO PCT APPLICATION NO. PCT/US03/04415
DATED : 14/2/2003
Claiming priority from US Patent Application
No. 10/094,350 dated 7/3/2002

8822
2744/DEL/P/05
17/9

A.S.I.
वि. वि. वि.
विवेक बिपागी
17.09.04

We submit herewith the under-mentioned documents for entering the Indian national phase under "Chapter II" from PCT application No.PCT/US03/04415 dated 14/2/2003 filed by : INTEL CORPORATION, a corporation incorporated in the State of Delaware, of 2200 Mission College Boulevard, Santa Clara, California 95052, United States of America, in respect of an invention for "METHOD AND SYSTEM FOR ACCELERATING THE CONVERSATION PROCESS BETWEEN ENCRYPTION SCHEMES" together with the prescribed fee of Rs.3,000.00.

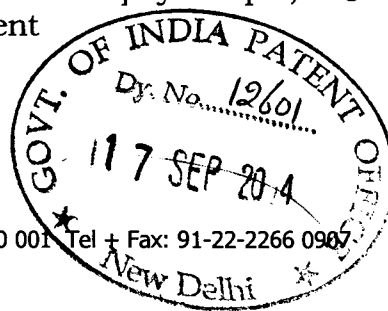
We also have the honour to submit herewith a request for examination on Form 19 in respect of the above-identified application together with the prescribed fee.

Yours faithfully,

[RANJNA MEHTA-DUTT]
OF REMFRY & SAGAR

Enclosures:

Application form 1A in triplicate, Specification in triplicate, Form 3, Form 5, Copy of International published PCT application, copy of search report, Drawings, Form 19 in duplicate, Rs. 6,000/- copy of General power, [Rs.3,000/- for filing the application + Rs. 3000 for Form 19] by cheque, abstract.
To follow: Application form 1A and priority document



ESTABLISHED 1827

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PCT/nonkey
19/10/04

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BK/ran/IP 2744/DELNP/2004

October 16, 2004

The Controller of Patents

The Patent Office

DELHI

Dear Sir,

Re: INTEL CORPORATION
Indian Patent Application No. 2744/DELNP/2004
Filed: September 17, 2004
National Phase Application corresponding to
PCT Application No. PCT/US03/04415
Filed on 14.02.2003
Claiming priority from the US Patent Application
No. 10/094,350 dated 07.03.2002

We have the honour to submit herewith following documents in respect of the above-mentioned national phase application.

- **Form PCT/IB/304**

Yours faithfully



(B.KOMBI)
Of REMFRY & SAGAR

Enclosure
As above



Remfry & Sagar

Attorneys-at-Law

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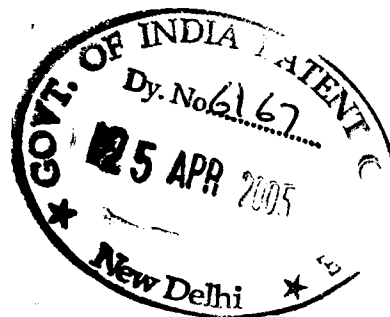
National Capital Region

India

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BKI/stv/IP. 2744/DELNP/2004
April 20, 2005

THE CONTROLLER OF PATENTS
The Patent Office
DELHI



Dear Sir,

Re: INTEL CORPORATION
Indian Patent Application No. 2744/DELNP/2004
Filed: 27/09/2004
National Phase Application corresponding to PCT
Application No. PCT/US03/04415 dated 14/02/2003
Claiming Priority from US Patent Application
No. 10/094,350 dated : 07/03/2002

PCT
25 APR 2005

We have the honour to submit herewith the following documents in respect of the above identified patent application.

- **Further statement and undertaking on Form 3 (in duplicate)**
- **Documents relating to Section 8(2) details.**

Yours faithfully

(B. KOMBI)
OF REMFRY AND SAGAR

Enclosure: As above

REMFRY & SAGAR

NOVEMBER 29, 2006

PJ / Controller
Accepted
1.12.06

The Controller of Patents,
The Patent Office,
NEW DELHI

EXAMINER: DR. PRITHIPAL SINGH
FINAL DATE: NOVEMBER 29, 2006.

Dear Sirs.

RE: INTEL CORPORATION,
Indian Patent Application No. 2744/DELNP/2004

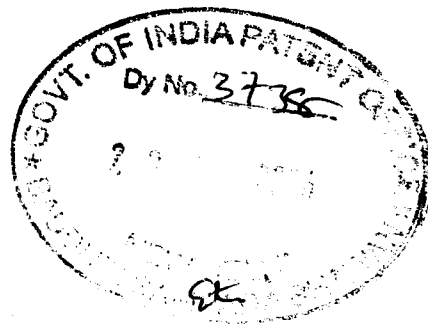
Pursuant to the official action dated
November 29, 2005, we have filed a
response on April 21, 2006.

We have not heard from you any further in
this regard and hence presume that the
application is in order for grant.

Kindly arrange for issuance of intimation of
grant letter at the earliest.

Yours faithfully,

Vinay Kohli
OF REMFRY & SAGAR



ESTABLISHED 1827

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BKI/ran/IP 2744/DELNP/2004
October 13, 2004

The Controller of Patents
The Patent Office
DELHI

Dear Sir,

Re: INTEL CORPORATION
Indian Patent Application No. 2744/DELNP/2004
Filed: September 17, 2004
National Phase Application corresponding to PCT
Application No. PCT/US03/04415 dated 14.02.2003
Claiming priority from the US patent application
No. 10/094,350 dated 07.03.2002

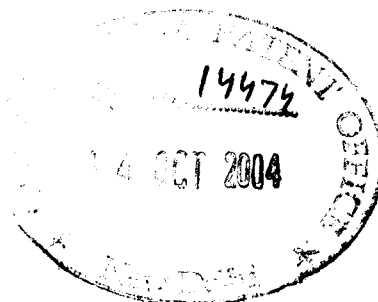
We have the honour to submit herewith the following documents in
respect of the above-identified PCT application.

◆ **Notarized copy of the US assignment (duly stamped)**

Yours faithfully

(B. KOMBI)
OF REMFRY & SAGAR

Enclosures:
As above



*Remfry & Sagor**Attorneys-at-Law**Remfry House at the Millennium Plaza**Sector 27, Gurgaon - 122 002**National Capital Region**India*

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JPL/emd/IP 2744/DELNP/2004

April 21, 2006

The Controller of Patents
The Patent Office
NEW DELHI

16347
24/4/06

Cash/PCT
Paid
24/04/06

EXAMINER: DR. PRITHIPAL SINGH
NORMAL DEADLINE: May 29, 2006

Dear Sirs,

Re: INTEL CORPORATION
Indian Patent Application No. 2744/DELNP/2004
Filing date: 17.09.2004

With reference to the official letter dated November 29, 2005, we submit herewith the under mentioned documents and present the following reply:

Regarding paragraph 1, the objection under Section 2(1)(j) is respectfully resisted. With regard to the prior art citations we submit as follows:

At the outset, we submit that the applicants had thoroughly revised the claims on file for the present application. The amended set of claims are not obvious in view of the disclosure contained in the documents cited in the FER (which were also cited in the corresponding PCT Search Report). In particular, claim 1 recites a security acceleration board for converting between encryption schemes. The board has a controller to receive data that has been encrypted according to a first encryption scheme, and controls the transmission of that data. The board has first and second hardware devices, where the first device decrypts the data according to the first encryption scheme, and the second device is coupled to the first device to receive the decrypted data from the first device and encrypt the decrypted data according to the second encryption scheme. The board also has a memory to store the data during conversion from the first encryption scheme to the second encryption scheme, and wherein the controller is to prevent access to this memory from outside the

board during the conversion. This type of board is particularly suitable for use in a wireless application protocol (WAP) gateway that may be owned and operated by a party other than the client 104 or content provider 106 (see Fig. 1 of Applicants' Specification). The references cited in the Search Report do not teach or suggest such an apparatus.

Beginning with XP-002249401 (Wireless Application Protocol 2.0 Security by Tamzin C. Jeffs), this reference recognizes the gateway as a single point of translation between the WTLS and SSL protocols. As part of the translation process, data is momentarily resent in the gateway as plaintext, and it is this "gap" in security that can pose a serious security risk. According to this reference, this risk may be reduced by gateway operators taking precautions to ensure that the text is never written to disk, and decryption and re-encryption takes place in the volatile internal memory and is erased as quickly as possible. As an alternative, "vendors", that is those who operate the server that provides the content, could host their own gateway. This would be within the vendor's own network environment and would be under their control and security measures. Thus, data encrypted by WTLS would pass directly between the client and the vendor's gateway and would then pass through the vendor's network to their web server. However, in practice, this is too large of an overhead for the vendors.

Lastly, the reference refers to WAP 2.0 as addressing the lack of end-to-end security, by introducing support and services for Internet protocols including TCP/IP, TLS and HTTP, into the WAP environment. In that case, Internet protocols can be used directly between the client and a wireless network, which eliminates the need for protocol translation at the WAP gateway.

Thus, although the reference discusses several alternatives for improving end to end security between a client device and a content server, the reference does not teach or suggest Applicant's claim 1, which is directed to an accelerator board that can be installed in the WAP gateway by the third party owner or operator of the gateway, where the acceleration board not only speeds up the conversion process, but also reliably prevents unauthorized access to the on-board memory that temporarily stores the data during conversion.

The next reference, WO 03/036913, is the Applicant's own patent application and is therefore, not believed to be a proper basis on which to reject Applicant's present application.

Turning now to the next reference, namely the article by Eun-Kyeong Kwon) et al., "Integrated Transport Layer Security: End-to-End Security Model Between WTLS and TLS" (XPO 10534256), this reference proposes another solution to the end-to-end security problem that appears when a WAP gateway is operated by someone other than the content provider. This reference proposes a mechanism referred to as integrated transport layer security, ITLS, which "prohibits the WAP gateway from having the plaintext message". The security partner of the content provider's web server is not the gateway in this case, but rather the client. The client encrypts twice, for the web server and the gateway, in the order named. To support these functions, certain certificate and client key exchange message types are added to the ITLS handshake protocol, and the application data encryption and decryption rules are modified. Such modification to the encryption/decryption protocols is not required by the Applicant's solution here, which is directed to an acceleration board that is to be inserted in the WAP gateway.

The next reference is WO 02/15523. In this reference, the WAP gateway gap security problem that has been addressed above does not appear to be a concern. Rather, this reference deals with how to authenticate a client and a server via a gateway, where the gateway is provided with a gateway public key and a corresponding gateway private key. See, page 8, line 14 to page 9, line 5. The particular security gap of concern, which occurs when a decrypted message from either the client or the server is stored in memory in the WAP gateway, is not addressed.

Finally, turning now to the last reference cited in the PCT Search Report, namely EP 1 083 722, in this reference, the conversion between WTLS and SSL is conducted in a secure area managed by the manager of the designated server (that is the content provider). The packets sent by the client terminal are passed "from the gateway to the secured area without all packets transmitted during a session being encoded". Thus, it does not appear that this reference teaches or suggests an acceleration board in the WAP gateway that is designed in the manner recited in Applicant's claim 1 and that, advantageously, is not managed by the content provider's server. See also the figures of this reference, none of which appear to teach or suggest an acceleration board as presented in Applicant's amended claims.

Accordingly, the learned Examiner is requested to withdraw his objection.

Regarding paragraph 3, the objection under Section 3(k) is respectfully resisted. Original method claims 10-22 have however been deleted from the present application. Accordingly, reconsideration and withdrawal of the objection is respectfully requested.

Regarding paragraphs 4, 5 and 7, original claims 6 and 7 merged into claim 1. In addition, the claim has been amended to recite a particular embodiment of the invention involving two hardware devices.

Reference numbers have also been inserted for those elements of the claims that are explicitly shown in the figures. Claims 2 to 4 have been revised as suggested therein by the learned Examiner.

As to original claims 10 and 23 which are independently worded, claim 10 has, of course, been cancelled while the claims that depend from claim 23 have been amended so as to depend from the single independent claim 1 (with repetitious portions being deleted).

Regarding paragraphs 6 and 8, we respectfully submit that claims relate to a group of inventions linked so as to form a single inventive concept and accordingly should be allowable in the present application.

Claims have been revised to meet the learned Examiner's objections.

The amendments carried out in the specification have necessitated retyping of pages 1, 7 and 9 to 14 as fresh pages 2, 8 and 10 to 12 respectively. The retyped pages are submitted herewith in duplicate along with former pages which have been cancelled. The remaining pages of the specification have been renumbered.

The title has been made consistent with the amended claims. Accordingly reconsideration and withdrawal of the ninth objection is respectfully requested.

Regarding paragraph 10, the objection is respectfully resisted. We submit that the distinguishing features as compared to prior art have been clearly defined in the specification.

Regarding paragraph 11, we respectfully submit that a Field Programmable Gate Array is believed to be sufficiently clear to one of ordinary skill in the art. As to how encryption and decryption is possible with one hardware element, this also is something that one of ordinary skill in the art would be able to implement without undue experimentation. As to reference number 302 mentioned on lines 5 and 8, at page 8, this obvious inadvertent error has been rectified, where the reference should read "304".

Regarding paragraph 13, we respectfully submit that the inventor is an US citizen.

Regarding paragraph 14, we respectfully submit that we have already filed the US assignment at the Patent Office under cover of our letter dated October 13, 2004, a copy whereof is enclosed herewith.

Regarding paragraph 17, we have the honour to submit herewith an abstract; (in duplicate).

Regarding paragraph 19, we also have the honour to submit herewith formal drawings (in duplicate).

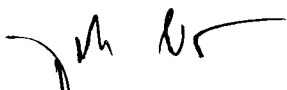
To meet the statutory requirement of section 8(1), of the Patents Act, 1970, we have the honour to submit herewith a further statement and undertaking on Form 3 along with petitions 137 and 138 of the Patents Rules, 2003 for condoning irregularity the delay in conveying such information.

We have the honour to submit herewith copy of US office actions to meet the requirement of Section 8(2) of our act.

All the remaining requirements have been complied with.

Grant of this application within the normal period expiring on **May 29, 2006**, is respectfully submitted. Before taking any adverse decision on this case, the Controller is respectfully requested to give an opportunity to the applicants to be officially heard in the matter.

Yours faithfully


[JAYANTA PAL]
Of Femfry & Sagar

Enclosures:

Application Form;
Complete Specification;
Drawing sheets
Form 3;
Petitions under Rules 137 and 138; (in duplicate)
Copy of US office action;
Copy of letter dated October 13, 2004
Abstract (in duplicate)

Substitute power of authority;
Retyped pages; and
Cancelled pages

Herewith Cheque: Rs. 8000/-