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**Principal Directorate 2.6– Information Systems**

**Open Patent Services**  
**Web Service Definition and Description**



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## Revision

Date	Version	Description	Author
13.01.2003	0.10	Initialisation	Roland Nelson
14.01.2003	0.50	Web Service Defintion added	Roland Nelson
15.01.2003	0.70	Added XML examples	Roland Nelson
16.01.2003	0.90	Verified XML examples	Roland Nelson
17.01.2003	0.91	Removed specific URLs in WSDL	Roland Nelson
20.01.2003	0.92	Additional texts supplied for basic calls	Graham Day
30.01.2003	0.95	Addition of SOAP as encapsulating protocol	Roland Nelson
31.01.2003	0.96	Input and output DTD's modified to reflect capabilities of host w.r.t. to input formats	Graham Day
17.02.2003	0.97	Change of URLs to externally available Web Service	Roland Nelson
21.03.2003	0.98	Added links to external files to check for possible updates. Addition of OPS homepage link.	Roland Nelson
27.03.2003	0.99	Change of bibliographic input requests. Ambiguous responses documented	Roland Nelson
25.06.2003	1.0	Document Revision and XML updates	Roland Nelson
06.11.2003	1.1	Added Web Server statistics	Roland Nelson
07.09.2004	1.2	Added DTD documentation, updated links	Roland Nelson
20.02.2006	1.3	Added documentation for document and fulltext access, replaced DTDs by current schemas	Sascha Schwarz
06.09.2006	1.4	reviewed & corrected content	Roland Nelson
05.02.2007	1.5	corrected DocumentRetrieval XML	Roland Nelson



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### Introduction

#### Purpose

This document describes the web service offered by the Open Patent Services web service architecture. The web service itself is described as well as its definition, allowing non-developers to understand the functionality of the service as well as offering developers the necessary information needed in order to connect to and actively use the web service.

#### Scope

The scope of this document lies within the extension of the Open Patent Services project.

#### References

All documents found in the initial project folder, delivered at the final roll-out of the Open Patent Services, can be viewed as references.

In order to be informed of possible changes and updates of the Open Patent Services web services, the following web page has been setup, to be visited on a regular basis:

<http://ops.espacenet.com>

#### Overview

This document initially gives a brief introduction into the background of the web services offered by the Open Patent Services. Thereafter the web services are defined, stating the usage rules/constraints belonging to the web services. Finally, the available web services are described in detail, offering a broad understanding of each web service.

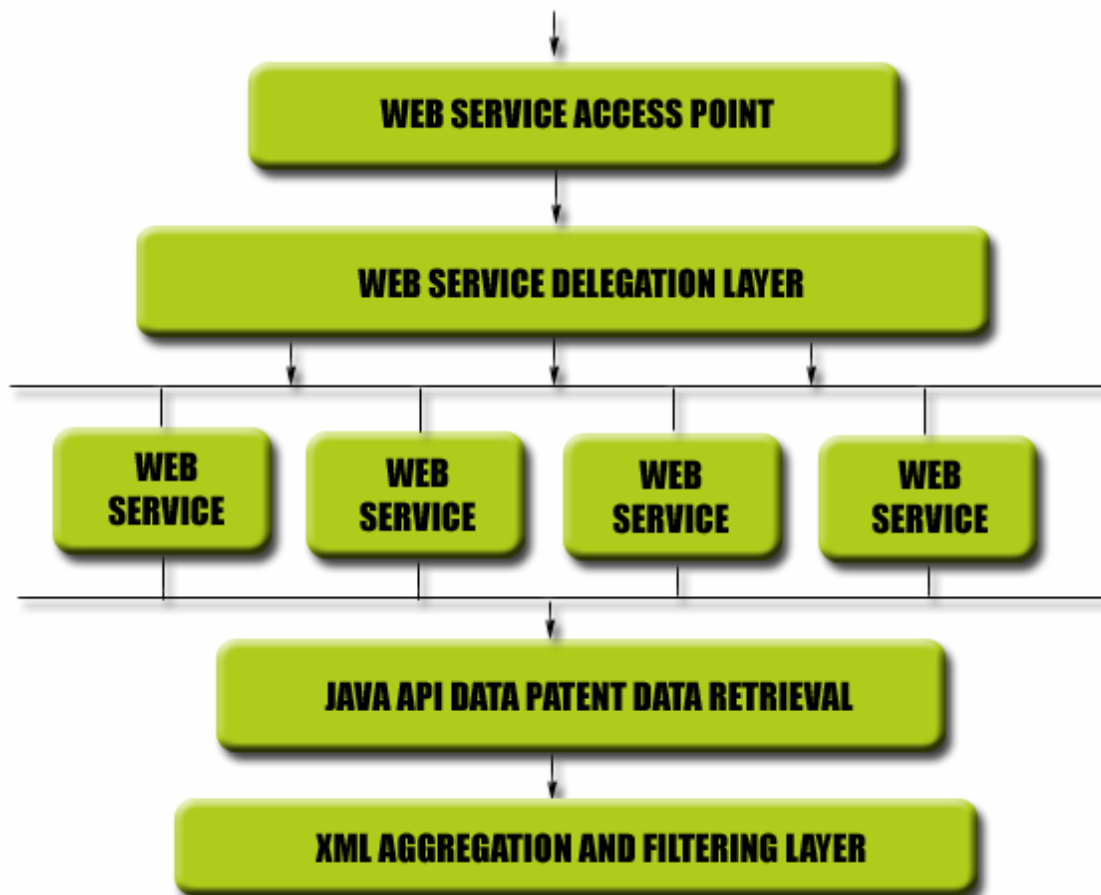


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### Web Service Definition

The following diagram shows the workflow of the web services processing chain:

A request is sent to the web service address, represented in the diagram by the web service access point. This request is then processed and evaluated in order to determine which type of patent data



request is to be called. Therefore, the request is analysed and delegated to the specific underlying web service implementation. The patent data is retrieved via the API, acting as a high-level interface between the web service architecture and the data repositories containing patent data. Finally, the retrieved data is brought into its final form and sent back to the calling client for visualisation or further processing. Currently, the following data requests are supported as web services and can be accessed via well-formed XML input requests to the web service access point:

- § patent family data,
- § legal data,
- § bibliographic data,



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- § full text data (claims and description),
- § document inquiry, and
- § document retrieval.

The result of an input request is a well-formed XML response.

### Data Transportation and Encapsulation

All Open Patent Services web service requests and responses are sent via HTTP and encapsulated within the SOAP (Simple Object Access Protocol) to ensure not only a standard means of data transportation (HTTP) but also a standard way of data packaging (SOAP).

Although the following sections describe in detail the syntax of input requests and output responses, here is a brief example of a SOAP encapsulated input request :

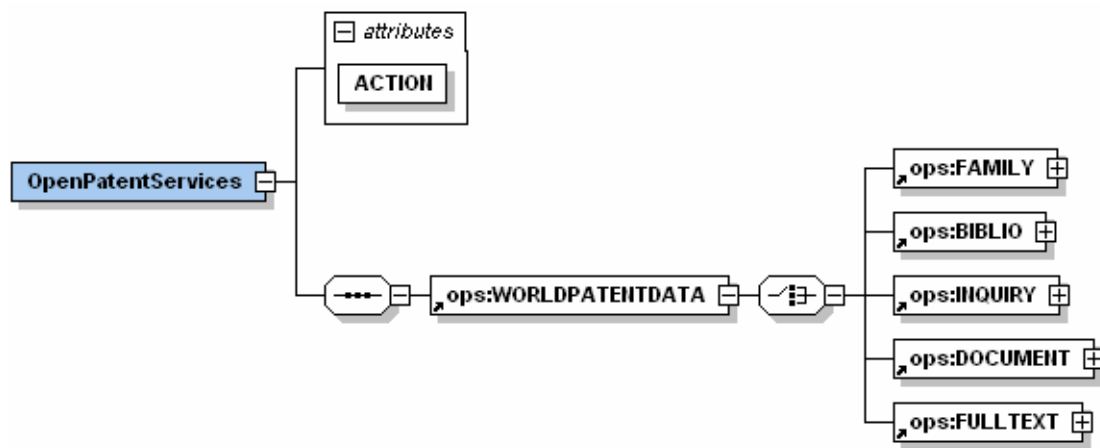
```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope
  xmlns:soapenv=http://schemas.xmlsoap.org/soap/envelope/
  xmlns:xsd=http://www.w3.org/2001/XMLSchema
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soapenv:Body>
    <ns1:getPatentData
      soapenv:encodingStyle=http://schemas.xmlsoap.org/soap/encoding/
      xmlns:ns1="urn:EPO-OpenPatentServices">
      <request xsi:type="xsd:string">&lt;OpenPatentServices
ACTION=&quot;Family&quot;&gt;&lt;WORLDPATENTDATA&gt;&lt;FAMILY
SEED=&quot; US      4000003A &quot; SEED_FORMAT=&quot;D&quot;
SEED_TYPE=&quot;PN&quot; DESC_LNG=&quot;ENG&quot;
DATE_MIGR=&quot;00000000&quot;
LEGAL=&quot;NO&quot;/&gt;&lt;/WORLDPATENTDATA&gt;&lt;/OpenPatentServi
ces&gt;</request>
    </ns1:getPatentData>
  </soapenv:Body>
</soapenv:Envelope>
```



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### Web Service Input requests

This section describes the format of an input request sent to the web services access point.



An input request has the root element `<OpenPatentServices>` and an attribute `action`, currently supporting the following values:

- § Family
- § Biblio
- § Legal
- § FamilyAndLegal
- § FamilyAndBiblio
- § FamilyAndLegalAndBiblio
- § LegalAndBiblio
- § Description
- § Claims
- § DocumentInquiry
- § DocumentRetrieval

Bibliographic and full text enquiries represent the simplest calls, needing only the attributes `SEED` and `SEED_FORMAT` to be present:

```
<BIBLIO SEED="EP1000000" SEED_FORMAT="E" />  
<FULLTEXT SEED="EP1000000" SEED_FORMAT="E" />
```

While full text enquiries are limited to the attributes `SEED` and `SEED_FORMAT`, a bibliographic enquiry may have an additional attribute `SEED_TYPE`. If this additional attribute is not given, a publication number is assumed:

```
<BIBLIO SEED="EP1000000" SEED_FORMAT="E" SEED_TYPE="PN" />
```



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Requests for document inquiry expect the same attributes as a bibliographic request. For successful document retrieval, the information from a document inquiry response is necessary:

```
<INQUIRY SEED="EP1000000" SEED_FORMAT="E" SEED_TYPE="PN" />
<DOCUMENT FORMAT="SINGLE_PAGE_PDF" ID="EP 1000000A1 I "
PAGE_NUMBER="1" SYSTEM="BNS" />
```

Family and legal data requests require more attributes in order to successfully retrieve patent data. Both types of request are wrapped in a FAMILY element where legal data is included based on the value of the LEGAL attribute. Each required attribute is explained below:

### **SEED\_FORMAT="D"**

The seed format can currently be:

D: DOCDB (except for BIBLIO requests)  
E: EPODOC

**SEED** in case of SEED\_FORMAT="D", must be in 17-character  
Format: "\_CC\_\_\_\_\_NNNNNNNKK" where \_ represents SPACE  
characters

C: Country Code  
N: Number (ID)  
K: Kind Code

The Kind Code must be present when handling (DOCDB) requests and can be filled with wildcards to enhance the patent request. Please refer to the current online input XML schema for exact information on the Kind Code entry (<http://ops.espacenet.com>)

### **SEED\_TYPE="PN"**

PR: Priority Number  
AP: Application Number  
PN: Publication Number

### **DESC\_LNG="ENG"**

ENG: Currently, only English is available

### **DATE\_MIGR="99999999"**

DATE\_MIGR: Must be of the Form ddmmyyyy  
"99999999" means: All Data

### **LEGAL="YES"**

YES: Legal Data additionally requested  
NO: Only Family Data requested

Examples for each supported request type are given in the following sub-sections.



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### Family request

This request takes as input (seed) a document identifier in DocDB or EPODOC format, and returns the family members corresponding to that seed.

The definition of family used is the extended family generated in an iterative approach based on priority documents. Further information about this definition can be found on the website of the European Patent Office:

[http://www.european-patent-office.org/news/epidosnews/index\\_epidos\\_search.htm](http://www.european-patent-office.org/news/epidosnews/index_epidos_search.htm)

For coverage of the family information, see the following page on the EPO's website:

[http://www.european-patent-office.org/inpadoc/pfs\\_index.htm](http://www.european-patent-office.org/inpadoc/pfs_index.htm)

```
<OpenPatentServices ACTION="Family">
  <WORLDPATENTDATA>
    <FAMILY SEED=" EP      0688878A1 "
      SEED_FORMAT="D"
      SEED_TYPE="PN"
      DESC_LNG="ENG"
      DATE_MIGR="99999999"
      LEGAL="YES"></FAMILY>
  </WORLDPATENTDATA>
</OpenPatentServices>
```

### Biblio request

This request takes as input (seed) a document identifier in EPODOC format, and returns the bibliographic data corresponding to that document. The bibliographic data returned is that which is available from the Worldwide database of the esp@cenet service. Currently this request type does not support DocDB input formats.

For coverage of the bibliographic data, see the following page on the EPO's esp@cenet site:

<http://ep.espacenet.com/coverage.htm>

```
<OpenPatentServices ACTION="Biblio">
  <WORLDPATENTDATA>
    <BIBLIO SEED="EP1000000" SEED_FORMAT="E"
      SEED_TYPE="PN" />
  </WORLDPATENTDATA>
</OpenPatentServices>
```

### Legal request

This request takes as input (seed) a document identifier in DocDB or EPODOC format, and returns the available legal events for the input document.

```
<OpenPatentServices ACTION="Legal">
  <WORLDPATENTDATA>
```



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```
<FAMILY SEED=" EP      0688878A1 "  
  SEED_FORMAT="D"  
  SEED_TYPE="PN"  
  DESC_LNG="ENG"  
  DATE_MIGR="99999999 "  
  LEGAL="YES "></FAMILY>  
</WORLDPATENTDATA>  
</OpenPatentServices>
```

For coverage of the legal information, see the following page on the EPO's website:  
[http://www.european-patent-office.org/inpadoc/prs\\_index.htm](http://www.european-patent-office.org/inpadoc/prs_index.htm)

Note that, although the request specifies a *FAMILY* element, this request will only return the legal status data for those members of the INPADOC family that match the seed specification.

The following requests are aggregates of the basic requests outlined above:

### Family and legal request

A request for family and legal status data will return the complete INPADOC family for the specified seed, with all available legal status data for each member of the family.

```
<OpenPatentServices ACTION="FamilyAndLegal ">  
  <WORLDPATENTDATA>  
    <FAMILY SEED=" EP      0688878A1 "  
      SEED_FORMAT="D"  
      SEED_TYPE="PN"  
      DESC_LNG="ENG"  
      DATE_MIGR="99999999 "  
      LEGAL="YES "></FAMILY>  
    </WORLDPATENTDATA>  
  </OpenPatentServices>
```

### Family and bibliographic request

The following XML shows an example of an input request, asking for the patent family and bibliographic data for each found family member for EP 0688878A1. Legal data is not desired.

```
<OpenPatentServices ACTION="FamilyAndBiblio ">  
  <WORLDPATENTDATA>  
    <FAMILY SEED=" EP      0688878A1 "  
      SEED_FORMAT="D"  
      SEED_TYPE="PN"  
      DESC_LNG="ENG"  
      DATE_MIGR="99999999 "  
      LEGAL="NO "></FAMILY>  
    </WORLDPATENTDATA>  
  </OpenPatentServices>
```



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### Family and legal and bibliographic request

```
<OpenPatentServices ACTION="FamilyAndLegalAndBiblio">
  <WORLDPATENTDATA>
    <FAMILY SEED=" EP      0688878A1 "
      SEED_FORMAT="D"
      SEED_TYPE="PN"
      DESC_LNG="ENG"
      DATE_MIGR="99999999"
      LEGAL="YES"></FAMILY>
  </WORLDPATENTDATA>
</OpenPatentServices>
```

### Claims request

The following XML represents a request for the claims of the document with the given seed.

```
<OpenPatentServices ACTION="Claims">
  <WORLDPATENTDATA>
    <FULLTEXT SEED=" EP      0688878A1 "
      SEED_FORMAT="D" />
  </WORLDPATENTDATA>
</OpenPatentServices>
```

### Description request

This XML is a request for the description with the seed provided.

```
<OpenPatentServices ACTION="Description">
  <WORLDPATENTDATA>
    <FULLTEXT SEED=" EP      0688878A1 "
      SEED_FORMAT="D" />
  </WORLDPATENTDATA>
</OpenPatentServices>
```

### Document inquiry request

When retrieving documents, the exact ID of the desired document needs to be known. Therefore, Open Patent Services provides a means to query for these IDs, using as input a seed as can be used for e.g. a bibliographic data request.

```
<OpenPatentServices ACTION="DocumentInquiry">
  <WORLDPATENTDATA>
    <INQUIRY SEED="EP1000000"
      SEED_FORMAT="E"
      SEED_TYPE="PN" />
  </WORLDPATENTDATA>
</OpenPatentServices>
```



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### Document retrieval request

This request can be used to retrieve a binary representation of a document from the EPO. The request given below is for page 4 of the full document with publication number “EP 1000000 A1” in PDF format. Information like the ID, the system (the repository where the document should be taken from), and the format can be obtained via a document inquiry.

```
<OpenPatentServices ACTION="DocumentRetrieval">
  <WORLDPATENTDATA>
    <DOCUMENT ID="EP 1000000A1 I "
      PAGE_NUMBER="4"
      SYSTEM="BNS"
      FORMAT="SINGLE_PAGE_PDF" />
  </WORLDPATENTDATA>
</OpenPatentServices>
```



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## Web service output responses

The following sub-sections describe in detail the types of responses the web service delivers based on the kind of input request it received.

### Family response

The possible result of a family request for the seed US4000000A may have the following content:

WORLDPATENTDATA										
FAMILY										
= Seed	US	4000000A								
= Seed_Format	D									
= Seed_Type	PN									
= Legal	NO									
= Format	DOCDB									
MEMBER (2)										
	= Pn	= Pd	= Ap	= Pn_e	PRIORITIES					
1	NL	7608405A	19770203	NL 7608405A	NL 7608405	A	PRIORITIES (1)			
							= Date	Text		
							1	00000000	US	60117675A
2	US	RE30685E	19810721	US 87539778A	US RE30685E	E	PRIORITIES (4)			
							= Date	Text		
							1	00000000	US	28661372A
							2	00000000	US	36046473A
							3	00000000	US	48851874A
							4	19780206	US	87539778A

XML representation:

```
<WORLDPATENTDATA>
  <FAMILY Seed=" US      4000000A "
    Seed_Format="D"
    Seed_Type="PN"
    Legal="NO"
    Format="DOCDB">
    <MEMBER Pn=" NL      7608405A "
      Pd="19770203"
      Ap=" NL      7608405A "
      Pn_e="NL 7608405  A  ">
      <PRIORITIES Date="00000000"> US      60117675A </PRIORITIES>
    </MEMBER>
    <MEMBER Pn=" US      RE30685E "
      Pd="19810721"
      Ap=" US      87539778A "
      Pn_e="US RE30685E  E  ">
      <PRIORITIES Date="00000000"> US      28661372A </PRIORITIES>
      <PRIORITIES Date="00000000"> US      36046473A </PRIORITIES>
      <PRIORITIES Date="00000000"> US      48851874A </PRIORITIES>
      <PRIORITIES Date="19780206"> US      87539778A </PRIORITIES>
    </MEMBER>
  </FAMILY>
</WORLDPATENTDATA>
```



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Legal response

A possible result of a legal data request:

```
<WORLDPATENTDATA>
  <FAMILY Seed=" US      4000000A "
    Seed_Format="D"
    Seed_Type="PN"
    Desc_lng="ENG"
    Legal="YES"
    Format="DOCDB"
    Date_Migr="00000000">
  <MEMBER Pn=" US      4000000A "
    Pd="19761228"
    Ap=" US      48851874A "
    Pn_e="US 4000000  A ">
  <LEGAL Code="AS08 " Desc="CONDITIONAL ASSIGNMENT"
    Infl=" " Date_Migr="00010101">
  <PRE LINE="00001">US      48851874A 2000-01-01AS08
    CONDITIONAL ASSIGNMENT DATE IN FORCE 20010203</PRE>
  <PRE LINE="00002">US      48851874A 2000-01-01AS08
    CONDITIONAL ASSIGNMENT OWNER NAME ABC</PRE>
  <PRE LINE="00003">US      48851874A 2000-01-01AS08
    CONDITIONAL ASSIGNMENT COUNTRY OF PUBLICATION IT</PRE>
  <PRE LINE="00005">US      48851874A 2000-01-01AS08
    CONDITIONAL ASSIGNMENT FILING DATE 20020919</PRE>
  <PRE LINE="00006">US      48851874A 2000-01-01AS08
    CONDITIONAL ASSIGNMENT COUNTRIES CONCERNED US</PRE>
  <L001EP Desc="Country code">US</L001EP>
  <L002EP Desc="F(iling) application or
    P(ublication)">F</L002EP>
  <L003EP Desc="Document number">      48851874      </L003EP>
  <L004EP Desc="Kind code">A </L004EP>
  <L005EP Desc="IPR type">PI</L005EP>
  <L007EP Desc="PRS date">2000-01-01</L007EP>
  <L008EP Desc="Legal event code 1">AS08</L008EP>
  <L500EP>
    <L525EP Desc="DATE IN FORCE">20010203</L525EP>
    <L509EP Desc="OWNER NAME"> XYZ</L509EP>
    <L504EP Desc="COUNTRY OF PUBLICATION">IT</L504EP>
    <L512EP Desc="FILING DATE">20020919</L512EP>
    <L524EP Desc="COUNTRIES CONCERNED">US</L524EP>
  </L500EP>
  </LEGAL>
  <PRIORITY Date="00000000"> US      28661372A </PRIORITY>
  <PRIORITY Date="00000000"> US      36046473A </PRIORITY>
  <PRIORITY Date="19740715"> US      48851874A </PRIORITY>
  </MEMBER>
  </FAMILY>
</WORLDPATENTDATA>
```



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**Bibliographic response**

The result of a bibliographic request for the seed SE434066C could contain the following data:

```
<WORLDPATENTDATA>
<BIBLIO Seed=" EP      0688878A1" Seed_Format="D" Seed_Type="PN">
  <SDOBI>
    <B111EP DATE="19951227 ">EP0688878</B111EP>
    <B131EP>A1</B131EP>
    <B211EP DATE="19950510">EP19950107049</B211EP>
    <B211EP TYPE="original" DATE="">95107049</B211EP>
    <B311EP DATE="19940623">CH19940002001</B311EP>
    <B311EP TYPE="original" DATE="">2001/94; </B311EP>
    <B311EP TYPE="original" DATE="">200194</B311EP>
    <B510 TYPE="EPC">C21D1/667; C21D9/50K</B510>
    <B510 TYPE="IPC">C21D9/50; C21D1/667</B510>
    <B510 TYPE="CI">C21D1/62; C21D9/50</B510>
    <B510 TYPE="CN">C21D1/56</B510>
    <B510 TYPE="AI">C21D1/667; C21D9/50</B510>
    <B510 TYPE="AN">C21D1/58</B510>
    <B542 TYPE="TI">Process and apparatus for post-treating welded
plates</B542>
    <B542 TYPE="OT">Verfahren und Vorrichtung zur Nachbehandlung
geschweisster Platinen</B542>
    <B542 TYPE="OT">Procédé et dispositif pour le post-traitement de
tôles soudées</B542>
    <B560 TYPE="PAT">DE2942868 B [X];          FR2138243 A
[A];FR1536983 A [A];          US3855014 A [A];EP0262363 A2 [A];
WO8605210 A1 [A];DE1159480 B [A]</B560>
    <B570EP>The method for treatment of sheet metal blanks (6) after
welding is characterised by cooling the weld seam with fluid (9). The
appts. includes a fluid delivery unit located after the blank welding
machine (3) and is fed from a fluid storage tank (8).
<img alt="Image placeholder" data-bbox="144 654 372 666"/></B570EP>
    <B711EP>ELPATRONIC AG (CH)</B711EP>
    <B711EP TYPE="original">ELPATRONIC AG</B711EP>
    <B721EP>URECH WERNER (CH)</B721EP>
    <B721EP TYPE="original">URECH, WERNER</B721EP>
  </SDOBI>
</BIBLIO>
</WORLDPATENTDATA>
```

**Family and bibliographic response**

```
<WORLDPATENTDATA>
<FAMILY Seed=" US      4000001A#" Seed_Format="D" Seed_Type="PN"
Legal="NO" Format="DOCDB" Truncated_Family="NO">
  <MEMBER Pn=" BE      843289A1" Pd="19761223" Ap=" BE      168208A
" Pn_e="BE843289
">
  <PRIORITY Date="19750623"> US      58946575A </PRIORITY>
  <BIBLIO Seed="BE843289" Seed_Format="E" Seed_Type="PN">
```



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```
<SDOBI>
  <B111EP DATE="19761223 ">BE843289</B111EP>
  <B131EP>A1</B131EP>
  <B211EP DATE="19760623">BE19760168208</B211EP>
  <B211EP TYPE="original" DATE="">168208</B211EP>
  <B311EP DATE="19750623">US19750589465</B311EP>
  <B311EP TYPE="original" DATE="">589465</B311EP>
  <B510 TYPE="EPC">B01D9/02; B01J19/00P; C13D3/02</B510>
  <B510 TYPE="IPC">B01D</B510>
  <B510 TYPE="CI">B01D9/00; B01J19/00; C13D3/00</B510>
  <B510 TYPE="AI">B01D9/02; B01J19/00; C13D3/02</B510>
  <B542 TYPE="OT">PERFECTIONNEMENTS A LA PRECIPITATION DE
MATIERES SOLIDES A PARTIR DE LIQUIDES</B542>
  <B711EP>GREAT WESTERN SUGAR CO</B711EP>
  <B721EP>TOTH L</B721EP>
</SDOBI>
</BIBLIO>
</MEMBER>
[ ... ]
</FAMILY>
</WORLDPATENTDATA>
```

Family and legal response

```
<WORLDPATENTDATA>
  <FAMILY Seed=" US      5000000A "
    Seed_Format="D"
    Seed_Type="PN"
    Desc_lng="ENG"
    Legal="YES"
    Format="DOCDB"
    Date_Migr="00000000">
  <MEMBER Pn=" EP      0560885A1 "
    Pd="19930922"
    Ap=" EP      92901454A "
    Pn_e="EP 560885      A ">
  <LEGAL Code="25      " Desc="LAPSED IN A CONTRACTING STATE "
    Infl="-" Date_Migr="00010101">
  <PRE LINE="00002">EP      92901454A 2001-06-0625
    -LAPSED IN A CONTRACTING STATE REF COUNTRY CODE MC</PRE>
  <PRE LINE="00003">EP      92901454A 2001-06-0625
    -LAPSED IN A CONTRACTING STATE DATE IN FORCE 20000630</PRE>
  <L001EP Desc="Country code">EP</L001EP>
  <L002EP Desc="F(iling) application or
    P(ublication)">F</L002EP>
  <L003EP Desc="Document number">      92901454      </L003EP>
  <L004EP Desc="Kind code">A </L004EP>
  <L005EP Desc="IPR type">PI</L005EP>
  <L006EP Desc="PRS type"> P </L006EP>
  <L007EP Desc="PRS date">2001-06-06</L007EP>
  <L008EP Desc="Legal event code 1">25 </L008EP>
```



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```
<L500EP>
  <L501EP Desc="REF COUNTRY CODE">MC</L501EP>
  <L525EP Desc="DATE IN FORCE">20000630</L525EP>
</L500EP>
</LEGAL>
<PRIORITY Date="00000000"> US      9108835W </PRIORITY>
<PRIORITY Date="00000000"> US      62422790A </PRIORITY>
</MEMBER>
[ ... ]
</FAMILY>
</WORLDPATENTDATA>
```

Family and legal and bibliographic response

```
<WORLDPATENTDATA>
  <FAMILY Seed=" US      5000000A# " Seed_Format="D" Seed_Type="PN"
  Desc_lng="ENG" Legal="YES" Format="DOCDB" Date_Migr="00010101"
  Truncated_Family="NO">
    <MEMBER Pn=" AT      177784T " Pd="19990415" Ap=" AT      92901454T
    " Pn_e="AT177784T      ">
      <LEGAL Code="REN      " Desc="CEASED DUE TO NON-PAYMENT OF THE
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        TO NON-PAYMENT OF THE ANNUAL FEE</PRE>
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        <L002EP Desc="Filing / Published Document">F</L002EP>
        <L003EP Desc="Document Number">      92901454</L003EP>
        <L004EP Desc="Kind Code">T</L004EP>
        <L005EP Desc="IPR Type">PI</L005EP>
        <L006EP Desc="PRS DOCUMENT TYPE">P</L006EP>
        <L007EP Desc="Gazette DATE">2003-09-15</L007EP>
        <L008EP Desc="Legal Event Code 1">REN</L008EP>
        <L018EP Desc="DATE last exchanged">2003-10-09</L018EP>
        <L019EP Desc="DATE first created">2003-10-06</L019EP>
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      <SDOBI>
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        <B131EP>T</B131EP>
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        C12R1/19</B510>
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[ ... ]  
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```

Document Inquiry

```
<WORLDPATENTDATA>  
<INQUIRY SEED="EP1000000" SEED_FORMAT="E" SEED_TYPE="PN">  
<DOCUMENT_PHYSICAL_INFO>  
<DOCUMENT_PHYSICAL_ID>  
<COUNTRY>EP</COUNTRY>  
<DOC_NUMBER>1000000</DOC_NUMBER>  
</DOCUMENT_PHYSICAL_ID>  
<DOCUMENT_PHYSICAL_INSTANCE SYSTEM="BNS" ID="EP 1000000PAFP "  
NUMBER_OF_PAGES="1" DESC="FirstPageClipping">  
<FORMAT_OPTIONS>  
<FORMAT>SINGLE_PAGE_PDF</FORMAT>  
<FORMAT>SINGLE_PAGE_TIFF</FORMAT>  
</FORMAT_OPTIONS>  
</DOCUMENT_PHYSICAL_INSTANCE>  
</DOCUMENT_PHYSICAL_INFO>  
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<DOCUMENT_PHYSICAL_ID>  
<COUNTRY>EP</COUNTRY>  
<DOC_NUMBER>1000000</DOC_NUMBER>  
<KIND>A1</KIND>  
</DOCUMENT_PHYSICAL_ID>  
<DOCUMENT_PHYSICAL_INSTANCE SYSTEM="BNS" ID="EP 1000000A1TI "  
NUMBER_OF_PAGES="6" DESC="Drawing">  
<FORMAT_OPTIONS>  
<FORMAT>SINGLE_PAGE_PDF</FORMAT>  
<FORMAT>SINGLE_PAGE_TIFF</FORMAT>  
</FORMAT_OPTIONS>  
</DOCUMENT_PHYSICAL_INSTANCE>  
<DOCUMENT_PHYSICAL_INSTANCE SYSTEM="BNS" ID="EP 1000000A1 I "  
NUMBER_OF_PAGES="12" DESC="FullDocument">  
<FORMAT_OPTIONS>  
<FORMAT>SINGLE_PAGE_PDF</FORMAT>
```



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```
<FORMAT>SINGLE_PAGE_TIFF</FORMAT>
</FORMAT_OPTIONS>
<DOCUMENT_PHYSICAL_SECTION NAME="ABSTRACT" START_PAGE="1" />
<DOCUMENT_PHYSICAL_SECTION NAME="BIBLIOGRAPHIC"
START_PAGE="1" />
<DOCUMENT_PHYSICAL_SECTION NAME="CLAIMS" START_PAGE="3" />
<DOCUMENT_PHYSICAL_SECTION NAME="DESCRIPTION" START_PAGE="2" />
<DOCUMENT_PHYSICAL_SECTION NAME="DRAWINGS" START_PAGE="5" />
<DOCUMENT_PHYSICAL_SECTION NAME="SEARCH_REPORT"
START_PAGE="11" />
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</DOCUMENT_PHYSICAL_INFO>
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START_PAGE="1" />
<DOCUMENT_PHYSICAL_SECTION NAME="CLAIMS" START_PAGE="3" />
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<DOCUMENT_PHYSICAL_SECTION NAME="DRAWINGS" START_PAGE="6" />
</DOCUMENT_PHYSICAL_INSTANCE>
</DOCUMENT_PHYSICAL_INFO>
</INQUIRY>
</WORLDPATENTDATA>
```

### Document Retrieval

The response for retrieval of a document contains both of the XML that is returned as the String response and, in case of successful retrieval, the requested document as a binary attachment to the SOAP response.

The XML response might look like this:

```
<WORLDPATENTDATA>
<DOCUMENT ID="EP 1000000A1 I " PAGE_NUMBER="1"
FORMAT="SINGLE_PAGE_PDF" SYSTEM="BNS">
<DESC>FullDocument</DESC>
<CONTENT_REF>EP 1000000A1 I .pdf</CONTENT_REF>
</DOCUMENT>
</WORLDPATENTDATA>
```



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The binary document can be found as an attachment to the SOAP response. The element *CONTENT\_REF* can be seen as a pointer, giving the name of attachment in question. Example code to retrieve the binary attachment from the SOAP message using Apache AXIS for Java is given below. Note that this represents only the parts that are important to access the attachments, and that error handling is left out for simplicity:

```
import org.apache.axis.Message;
import org.apache.axis.MessageContext;
import org.apache.axis.client.Call;
import javax.xml.soap.AttachmentPart;

[ ... ]

Call call = null;
// create the call, set the parameters and execute it
MessageContext ctx = call.getMessageContext();
Message msg = ctx.getResponseMessage();
if (msg != null) {
    Iterator attachIter = msg.getAttachments();
    while (attachIter.hasNext()) {
        AttachmentPart attachment = (AttachmentPart) attachIter.next();
        // do something with the attachment, e.g. save it in a
        // local variable
    }
}

[ ... ]
```

### Claims

<WORLDPATENTDATA>

<FULLTEXT Seed="EP1000000" Seed\_Format="E">

<CLAIMS LANG="EN">

<P>

1. Apparatus for manufacturing green bricks from clay for the brick manufacturing industry, comprising a circulating conveyor carrying mould containers combined to mould container parts, a reservoir for clay arranged above the mould containers, means for carrying clay out of the reservoir into the mould containers, means for pressing and trimming clay in the mould containers, means for supplying and placing take-off plates for the green bricks and means for discharging green bricks released from the mould containers, characterized in that the apparatus further comprises means for moving the mould container parts filled with green bricks such that a protruding edge is formed on at least one side of the green bricks.

</P>

<P>

2. Apparatus as claimed in claim 1, wherein the edge-forming means are adapted to move the mould container parts repeatedly for a certain period.

</P>



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```
[ ... ]  
</CLAIMS>  
</FULLTEXT>  
</WORLDPATENTDATA>
```

### Description

```
<WORLDPATENTDATA>  
<FULLTEXT Seed="EP1000000" Seed_Format="E">  
<DESCRIPTION ID="desc" LANG="EN">  
<P>  
[0001] The invention relates to an apparatus for  
manufacturing green bricks from clay for the brick manufacturing  
industry, comprising a circulating conveyor carrying mould containers  
combined to mould container parts, a reservoir for clay arranged  
above the mould containers, means for carrying clay out of the  
reservoir into the mould containers, means for pressing and trimming  
clay in the mould containers, means for supplying and placing take-  
off plates for the green bricks and means for discharging green  
bricks released from the mould containers. Such an apparatus is known  
in the field and is for instance described in the patent 1000186 of  
applicant. The known apparatus is extremely suitable for automated  
production of large numbers of green bricks for the brick  
manufacturing industry. The bricks fired from these green bricks have  
a substantially smooth, uniform appearance.  
</P>  
<P>  
[0002] A recent demand has developed on the market for  
bricks which appear as if they have been manufactured according to  
traditional methods.  
</P>  
[ ... ]  
</DESCRIPTION>  
</FULLTEXT>  
</WORLDPATENTDATA>
```

### Ambiguous Data response

In the case of an ambiguous search result, a response wrapped in an error context with the AMBIGUOUS\_SEED type is returned to the calling client. A list of seeds are returned wherefrom one must be chosen in order to clarify and finalise the search. An example of an ambiguous response is the following XML data:

```
<WORLDPATENTDATA>  
.....  
<ERROR TYPE="AMBIGUOUS_SEED"  
CONTEXT="ambiguous seeds found on input">  
<SEED_OPTION  
Seed_Type="PN"  
Seed_Format="D"> US 5000000A1  
</SEED_OPTION>
```



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```
<SEED_OPTION
  Seed_Type="PN"
  Seed_Format="D"> US 500000B1
</SEED_OPTION>
</ERROR>
</WORLDPATENTDATA>
```

**Error response**

In the unexpected event of an error the response could have the following appearance:

WORLDPATENTDATA	
ERROR	
= TYPE	INVALID_RESULT
= CONTEXT	SAXException while validating output
⓪ simple_message	Invalid XML result found
⓪ detailed_message	Invalid XML Output

XML representation:

```
<WORLDPATENTDATA>
  <ERROR TYPE="INVALID_RESULT"
    CONTEXT="SAXException while validating output">
    <simple_message>Invalid XML result found</simple_message>
    <detailed_message>Invalid XML Output</detailed_message>
  </ERROR>
</WORLDPATENTDATA>
```



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**Appendix**

**Web Service Description Language**

This WSDL file may not be up to date and should only be used for explanatory purposes. The current Web Services Description Language file can be found at <http://ops.espacenet.com> and should always be used when developing programmatic input requests.

**Open Patent Services input and output XML schemas**

Please use the input/output schemas found at <http://ops.espacenet.com>