U.S. Patent and Trademark Office

Patent Data/SGML

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U.S. Patent and Trademark Office Patent Data/SGML

The purpose of this technical specification documentation is to provide a detailed description of the organization and content of the U.S. Patent and Trademark Office (USPTO) Patent Data/SGML.

The Patent Data/SGML will consist of patent data records appearing in the Standard Generalized Markup Language (SGML), as defined by this documentation, the ST32US Document Type Definition (DTD) file, reference Appendix A, and the World Intellectual Property Organization (WIPO) Standard ST. 32, reference Appendix B.

The SGML tag identifiers, and the appropriate data content, described in this document are used for the creation and subsequent use of the compound data of U.S. Patent documents.

Each physical record within the Patent Data/SGML is defined as a numeric item in the following Document Structure, and will be a variable length alphanumeric ASCII string terminated by an ASCII linefeed (Hex “0A”) character.

An SGML tag is an ASCII string that identifies the start or end of a data field, record, or logical group of records. Tags with data content are always paired, with a leading tag delimited by “<….>” and a trailing tag delimited by “</….>. Tags without data content, used to define the presence of a condition, are referred to as empty tags and only use the leading tag “<….>”. Imbedded tags, tags within tags, must be fully encapsulated. Leading and trailing tags must not overlap.

The SGML tags that include the constant **US** identify an extension of WIPO Standards ST.32 to accommodate United States granted documents.

Each patent will begin with a mandatory **<!DOCTYPE** record that defines the version of the DTD used by the USPTO to process the file.

<!DOCTYPE patdoc PUBLIC “-//USPTO//DTD US ST.32 Published 19971224//en” []>

Each patent will consist of a SGML tagged ASCII file and related complex work unit (CWU) files, all placed into a single patent file using an industry standard “zip”. The file name for each patent will consist of the 8-position patent number followed by the file extension “zip” (i.e. 05418363.zip). The output, for all patents issued for one week, will be “tarred” onto a DLT Type III-XT magnetic tape without hardware compression.

SGML for Patent Data (continued)

Document Structure

1. <PATDOC>

The **<PATDOC>** tag is a mandatory record identifying the start of every **Patent Document.** The patent document element will consist of the following required Sub-Documents in sequence as follows:

SDOBI - Bibliographic Information
SDOAB - Abstract Information
SDODE - Description Information
SDOCL - Claim Information
SDODR - Drawing Information

2. <SDOBI>

The **<SDOBI>** tag is a mandatory record identifying the start of the **Bibliographic Information** sub-document.

3. <B100>

The **<B100>** tag is a mandatory record identifying the start of the **Document Identification.**

4. <B110><DNUM>**cccccccc**</DNUM></B110>

The **<B110>** record is mandatory and contains the **Patent Number**, 8-positions alphanumeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DUM>** end tag. The record is terminated by the mandatory **</B110>** end tag.

Patent Types	Data Content
-Design Patents -	Position 1: A constant "D" identifying the patent as a Design. Positions 2-8: A 7-position numeric identification, right justified, with leading zeros.
-Design SIR -	Position 1-2: A constant "HD" identifying the Statutory Invention Registration (SIR) document as a Design. Positions 3-8: A 6-position numeric identification, right justified, with leading zeros.

Figure 1. Patent Number

-Plant SIR -	Position 1-2: A constant "HP" identifying the Statutory Invention Registration (SIR) document as a Plant. Positions 3-8: A 6-position numeric identification, right justified, with leading zeros.
-Utility SIR -	Position 1: A constant "H" identifying a Statutory Invention Registration (SIR) utility document. Positions 2-8: A 7-position numeric identification, right justified, with leading zeros.
-Plant Patent -	Position 1-2: A constant "PP" identifying the patent as a Plant. Positions 3-8: A 6-position numeric identification, right justified, with leading zeros.
-Reissue Patent -	Position 1-2: A constant "RE" identifying the patent as a Reissue. Positions 3-8: A 6-position numeric identification, right justified, with leading zeros.
-Utility Patent - (Invention)	Positions 1-8: A 8-position numeric identification, right justified, with leading zeros.

Figure 1. Patent Number (continued)

The patent documents will reside on the file in the following document sequence. Patents within each kind of document will be in ascending sequence.

Design Patents
Statutory Invention Registrations (SIR)
Plant Patents
Reissue Patents
Utility Patents

5. <B122US>a……..a</122US>

The **<B122US>** record is optional. It will be present for all Statutory Invention Registrations (SIR) and contain the following "statement of attributes". The record is terminated by the mandatory **</B122US>** end tag.

<B122US>**A statutory invention registration is not a patent. It has the defensive attributes of a patent but does not have the enforceable attributes of a patent. No article or advertisement or the like may use the term patent, or any term suggestive**

of a patent, when referring to a statutory invention registration. For more specific information on the rights associated with a statutory invention registration see 35 U.S.C.157. </B122US>.

6. <B130>cc</B130>

The **<B130>** record is mandatory and contains the **Kind of Document**, 2-positions alphanumeric, left justified, with a trailing space. **cc** represents the kind of document code as defined in Figure 2. The record is terminated by the mandatory **</B130>** end tag.

Kind of Document	Code (Reference Appendix C - WIPO Standard ST.16)
-Utility Patent	A
-Reissue Patent	E
-Statutory Invention Registration	H
-Plant Patent	P
-Design Patent	S

Figure 2. Kind of Document

7. <B140><DATE>**yyyymmdd**</DATE></B140>

The **<B140>** record is mandatory and contains the **Date of Publication**, 8-positions numeric. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the patent document was issued. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The record is terminated by the mandatory **</B140>** end tag.

8. <B190>**US**</B190>

The **<B190>** record is mandatory and contains the **Publishing Country**, a 2-position alpha constant **US**. The record is terminated by the mandatory **</B190>** end tag.

9. </B100>

The **</B100>** tag is a mandatory record identifying the end of the **Document Identification.**

10. <B200>

The **<B200>** tag is a mandatory record identifying the start of the **Domestic Filing Data**.

SGML for Patent Data (continued)

11. <B210><DNUM>**yyyynnnnnn**</DNUM></B210>

The **<B210>** tag is a mandatory record and contains the **Application Number,** 10-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **yyyynnnnnn** represents the 4-position filing year, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The record is terminated by the mandatory **</B210>** end tag.

12. <B211US>**nn**</B211US>

The **<B211US>** record is mandatory and contains the **Series Code**, 2-positions numeric, right justified, with leading zeros. **nn** represents the Series Code as defined in Figure 3. The record is terminated by the mandatory **</B211US>** end tag.

Series Code	Filing Dates
02	Earlier than January 1, 1948
03	January 1, 1948 - December 31, 1959
04	January 1, 1960 - December 31, 1969
05	January 1, 1970 - December 31, 1978
06	January 1, 1979 - December 31, 1986
07	January 1, 1987 - December 31, 1992
08	January 1, 1993 - December 29, 1997
09	Beginning December 30, 1997
29	Design Application
60	Provisional Application

Figure 3. Series Code

13. <B220><DATE>**yyyymmdd**</DATE></B220>

The **<B220>** record is mandatory and contains the **Application Filing Date**, 8-positions numeric. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. The record is terminated by the mandatory **</B220>** end tag.

SGML for Patent Data (continued)

14. <B221US>

The **<B221US>** record is optional. When present it signifies that the application was filed under **Rule 47**, indicating the applicant(s) refused to execute the application or could not be found. This record signifies the occurrence of a condition and does not contain data. This is an empty tag and will not have an end tag.

15. <B222US>

The **<B222US>** record is optional. When present it signifies that the prosecution of the application includes the **Continued Prosecution Application (CPA)** procedure. This record signifies the occurrence of a condition and does not contain data. This is an empty tag and will not have an end tag.

16. </B200>

The **</B200>** tag is a mandatory record identifying the end of the **Domestic Filing Data.**

17. <B300>

The **<B300>** record is optional. When present, it identifies the start of **Foreign Priority Data**, and includes the mandatory <B310>, <B320>, and <B330> records.

18. <B310><DNUM>**c……..c**</DNUM></B310>

The **<B310>** record contains the **Priority Application Number**, variable length alphanumeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **c……..c** represents the priority application number. The document number field is terminated by the mandatory **</DNUM>** end tag. The record is terminated by the mandatory **</B310>** end tag.

19. <B320><DATE>**yyyymmdd**</DATE></B320>

The **<B320>** record is mandatory and contains the **Priority Application Filing Date**, 8-positions numeric. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the priority application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The record is terminated by the mandatory **</B320>** end tag.

SGML for Patent Data (continued)

20. <B330><CTRY>**aa**</CTRY></B330>

The **<B330>** record is mandatory and contains the **Priority Country Code**, 2-positions alpha. The <**CTRY>** is a mandatory tag defining this as a structured country code field. **aa** identifies the priority country code. Reference Appendix D – Two-Character Codes for Countries and Intergovernmental Organizations. The priority country code field is terminated by the mandatory <**/CTRY>** end tag. The record is terminated by the mandatory **</B330>** end tag.

Multiple Foreign Priority Data can be present and each occurrence will repeat the <B310>, <B320>, and <B330> records.

21. </B300>

The **</B300>** tag is a mandatory record, when a **<B300>** is present, and identifies the end of the **Foreign Priority Data.**

22. <B400>

The **<B400>** tag is an optional record. When present, it identifies the start of the **Public Availability Dates and Term of Protection.**

23. <B472>

The **<B472>** tag is an optional record. When present, it identifies the start of the **Term of Grant**.

24. <B473><DATE>**yyyymmdd**</DATE></B473>

The **<B473>** record is optional. When present, it will contain the **Disclaimer Date**, 8-positions numeric. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date of disclaimer for the patent. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The record is terminated by the mandatory **</B473>** end tag.

25. <B473US>

The **<B473US>** record is optional. When present it signifies that the patent is subject to a **Terminal Disclaimer.** This record signifies the occurrence of a condition and does not contain data. This is an empty tag and will not have an end tag.

SGML for Patent Data (continued)

26. <B474>**nn**</B474>

The **<B474>** record is optional. It is a mandatory record for Design Patents only and contains the **Term of Grant**, 2-positions numeric. **nn** defines the term, in years, of a Design Patent. A term of 14 years would appear as 14. The record is terminated by the mandatory **</B474>** end tag.

27. <B474US>**c…….c**</B474US>

The **<B474US>** record is optional. When present it will contain a **Term Extension** under 35 U.S.C. 154(b), variable length alphanumeric. **c……..c** represents the term extension. Expressed as variable length from 1 day to the number of days in 5 years minus 1 day. Example: 1,324 days would be appear as <B474US>1324<B/474US>, and 200 days would appear as <B474US>200<B/474US>. Or expressed as a constant "5 years" denoting 5 complete years. Example: <B474US>5 years<B/474US>. The record is terminated by the mandatory **</B474US>** end tag.

28. </B472>

The **</B472>** tag is a mandatory record when a **<B472>** record is present and identifies the end of the **Term of Grant.**

29. </B400>

The **</B400>** tag is a mandatory record, when a**<B400>** is present, and identifies the end of the **Public Availability Dates and Term of Protection.**

30. <B500>

The **<B500>** tag is a mandatory record identifying the start of the **Technical Information**.

31. <B510>

The **<B510>** tag is a mandatory record identifying the start of the **International Patent Classification (IPC) or Locarno Classification.**

32. <B511>**c…….c**</B511>

The **<B511>** record is mandatory and contains an **International Patent Classification (IPC) or Locarno Classification** for Design Patents, variable length alphanumeric. **c……..c** represents the main IPC or Locarno classification as defined in Figure 4. The record is terminated by the mandatory **</B511>** end tag.

SGML for Patent Data (continued)

33. <B512>**c…….c**</B512>

The **<B512>** record is optional. When present, it contains an **International Patent Classification (IPC)**, variable length alphanumeric. **c……..c** represents a further or additional IPC as defined in Figure 4. The record is terminated by the mandatory **</B512>** end tag.

Multiple further or additional IPC can be present and each occurrence will repeat the <B512> record.

34. <B516>**n**</B516>

The **<B516>** record is mandatory and contains the **Edition** of the International Patent Classification (IPC) or Locarno Classification**,** 1-position numeric. **n** denotes the edition of a <510> record and all <B511> and <B512> IPC record(s). The record is terminated by the mandatory **</B516>** end tag.

35. </B510>

The **</B510>** tag is a mandatory record identifying the end of the **International Patent Classification (IPC) or Locarno Classification.**

International Patent Classification (IPC)

-Position 1	- Section -	1 alphabetic character.
-Positions 2-3	- Class -	2 numeric characters.
-Position 4	- Subclass -	1 alphabetic character.
-Positions 5-7	- Group -	3 alphanumeric characters,
-Beginning in Position 8	- Subgroup -	Maximum of 7 alphanumeric characters, right justified with leading spaces.

Note: The above description defines the appearance for the IPC for all kind of documents except Design Patents. Design Patents will contain the Locarno classification appearing in the following manner.

Figure 4. International Patent Class

International Patent Classification (IPC)

-Positions 1-2	- Class -	2 numeric characters, right justified with leading zeros.
-Positions 3-4	- Subclass -	2 numeric characters, right justified with leading zeros.

Note: Only one Locarno classification will be present for a Design Patent.

SGML for Patent Data (continued)

36. <B520>

The **<B520>** tag is a mandatory record identifying the start of the **U.S. Patent Classification.**

37. <B521>**c…….c**</B521>

The **<B521>** record is mandatory and contains a **U.S. Patent Classification**, variable length alphanumeric. **c……..c** represents the main or original US Classification as defined in Figure 5. The record is terminated by the mandatory **</B521>** end tag.

38. <B522>c…….c</B522>

The **<B522>** record is optional. When present, it will contain a **U.S. Patent Classification**, variable length alphanumeric. **c……..c** represents a further or cross reference US Classification as defined in Figure 5. The record is terminated by the mandatory **</B522>** end tag.

Multiple further or cross reference US Classifications can be present and each occurrence will repeat the <B522> record.

39. </B520>

The **</B520>** tag is a mandatory record identifying the end of the **U.S. Patent Classification.**

U.S. Patent Classification

-Positions 1-3	- Class - 3 alphanumeric characters. -Design Patents will contain a "D" in position 1, positions 2 and 3 will be right justified with a leading space when required for a single digit class. -Plant Patents - 3 alphabetic characters containing "PLT". -ALL OTHER PATENTS - 3 alphanumeric characters, right justified with leading spaces.
-Beginning Position 4	-Sub-Class - variable length in alphanumeric characters. -ALL PATENTS - 3 alphanumeric characters, right justified with leading spaces, and, if present, 1 to 3 characters to the right of the decimal point, left justified. NOTE: The decimal point is assumed and is not present in this record. -A Digest entry could be present as a sub-class and appear as follows: 3 alphabetic characters containing "DIG", followed by 3 characters, right justified with leading spaces.

Figure 5. U.S. Patent Classification

SGML for Patent Data (continued)

40. <B540>c……..c</B540>

The **<B540>** is a mandatory record identifying the **Title of Invention**, variable length alphanumeric. **c……..c** contains a short concise descriptive title of the invention.
The record is terminated by the mandatory **</B540>** end tag.

41. <B560>

The **<B560>** record is optional. When present, it identifies the start of **Prior Art**, and may include optional <B561> **Patent Document Reference** record(s) and may include optional <B562> **Other Reference** record(s).

42. <B561><DNUM>**cccccccc**</DNUM><DATE>**yyyymmdd**</DATE><CTRY>**aa**</CTRY><KIND>**cc**</KIND><SNM>**c……..c**</SNM><PNC>**c……..c**</PNC></B561>

The **<B561>** record is optional and contains a **Patent Document Reference**, variable length alphanumeric. The <B561> record may contain either a U.S. or foreign patent document reference. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the referenced document number, formatted as defined in Figure 1 for US references. The document number for foreign references can be variable length alphanumeric. The document number field is terminated by the mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the issue date of the referenced patent. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros. The 2-position dd day field will contain a constant of zeros. The date field is terminated by the mandatory </**DATE>** end tag. The <**CTRY>** is an optional tag defining this as a structured country code field. **aa** identifies the foreign office that issued the prior art document. Reference Appendix D – Two-Character Codes for Countries and Intergovernmental Organizations. The **<CTRY>** tag will not be present when the prior art document was issued by the United States. The country code field, when present, is terminated by the mandatory </**CTRY>** end tag. The **<KIND>** tag is optional and contains the Kind of Document, 2-positions alphanumeric, left justified, with a trailing space. **cc** represents the kind of document code as defined in Figure 2 for a U.S. patent document reference or as defined in Appendix C for a foreign patent document reference. The kind of document field, when present is terminated by the mandatory **</KIND>** end tag. **<SNM>** is an optional tag defining this as a structured surname field and will only be present when the prior art document was issued by the United States. **c……..c** contains the variable length alphabetic patentee surname. If an additional name description is present, i.e., Jr., Senior, III, etc. It will be separated from the surname by a comma and a space. If there is more that one patentee, the surname of the first patent is followed by " et al". The surname field, when present, is terminated by the mandatory **</SNM>** end tag. The **<PNC>** tag is optional and when present contains the main or original classification of the referenced patent document. **c……..c** represents a variable length alphanumeric classification as defined in

Figure 4 for IPC Classifications or Figure 5 for US Classifications. The classification field is terminated by a mandatory **</PNC>** end tag. The record is terminated by the mandatory **</B561>** end tag.

Multiple Patent Document References can be present and each occurrence will repeat the <B561> record. When U.S. <B561> record(s) and foreign <B561> record(s) are both present, all U.S. record(s) will appear first, followed by all foreign record(s).

43. <B562>**c……..c**</B562>

The **<B562>** record is optional. When present, it identifies the start of **Other Reference**, variable length alphanumeric. **c……..c** represents a variable length alphanumeric other reference. An other reference could be material from books, pamphlets, trade journals, pages from catalogues, etc. The record is terminated by the mandatory **</B562>** end tag.

Multiple Other References can be present and each occurrence will repeat the <B562> record.

44. </B560>

The **</B560>** tag is a mandatory record, when a **<B560>** is present, and identifies the end of the **Prior Art**.

45. <B570>

The **<B570>** tag is a mandatory record identifying the start of the **Claims Allowed/ Exemplary Claim Information.**

46. <B577>**n….n**</B577>

The **<B577>** record is mandatory and contains the **Number of Claims Allowed,** variable length numeric. **n….n** defines the number of claims allowed. Note: Design Patents and Plant Patents will contain a constant of "1". All other Patents will contain a variable length field. The record is terminated by the mandatory **</B577>** end tag.

47. <B578US>**c….c**</B578US>

The **<B578US>** record is mandatory and contains the **Exemplary Claim Number,** variable length alphanumeric. **c….c** identifies the Exemplary Claim Number. The record is terminated by the mandatory **</B578US>** end tag.

Multiple exemplary claim numbers can be present and each occurrence will repeat the <B578US> record.

SGML for Patent Data (continued)

48. </B570>

The **</B570>** tag is a mandatory record identifying the end of the **Claims Allowed/ Exemplary Claim Information.**

49. <B580>

The **<B580>** record is mandatory identifying the start of **Field of Search,** and must include, at least one, <B581> or <B582> or <B583US> record.

50. <B581>**c…….c**</B581>

The **<B581>** record is optional, when present, it contains a **Field of Search** International patent classification, variable length alphanumeric. **c……..c** represents an international patent classification as defined in Figure 4. The record is terminated by the mandatory **</B581>** end tag.

Multiple field of search international patent classifications can be present and each occurrence will repeat the <B581> record.

51. <B582>**c…….c**</B582>

The **<B582>** record is optional, when present, it contains the structured **Field of Search** US patent classification, variable length alphanumeric. **c……..c** represents a US patent classification as defined in Figure 5. The record is terminated by the mandatory **</B582>** end tag.

Multiple field of search US patent classifications can be present and each occurrence will repeat the <B582> record

52. <B583US>**c…….c**</B583US>

The **<B583US>** record is optional, when present, it contains an unstructured **Field of Search** US patent classification, variable length alphanumeric. **c……..c** represents a US patent classification that is not defined in Figure 5, such as ranges (e.g. 530/324-330), limited search (e.g. 405/202 (U.S. only)), and mechanized search (e.g. 364/200 MS File). As shown in the previous examples, the content of each <B583US> record will appear as it does at INID code [58] on the front page of the patent. The record is terminated by the mandatory **</B583US>** end tag.

Multiple unstructured field of search US patent classifications can be present and each occurrence will repeat the <B583US> record.

SGML for Patent Data (continued)

53. </B580>

The **</B580>** tag is a mandatory record and identifying the end of the **Field of Search.**.

54. <B590>

The **<B590>** record is optional. When present, it identifies the start of **Drawing Information,** and includes the optional <B594US>, <B595US>, <B595> and <B596> records.

55. <B594US>**c….c**</B594US>

The **<B594US>** record is optional. When present, it will identify that a **microfiche appendix** has been filed**,** variable length alphanumeric. **c….c** defines the number of microfiche included and the number of pages. Note: The two values will be separated by a comma. The record is terminated by the mandatory **</B594US>** end tag.

56. <B595>**n….n**</B595>

The **<B595>** record is optional, when present, will contain the **Number of Drawing Pages,** variable length numeric. **n….n** defines the number of drawing pages. The record is terminated by the mandatory **</B595>** end tag.

57. <B595US>**n….n**</B595US>

The **<B595US>** record is optional, when present, it will contain the **Number of Drawing Pages filed in Color,** variable length numeric. **n….n** defines the number of drawing pages filed in color. The record is terminated by the mandatory **</B595US>** end tag.

58. <B596>**n….n**</B596>

The **<B596>** record is mandatory and contains the **Number of Drawing Figures,** variable length numeric. **n….n** defines the number of drawing figures. The record is terminated by the mandatory **</B596>** end tag.

59. </B590>

The **</B590>** tag is a mandatory record, when a **<B590>** is present, and identifies the end of the **Drawing Information.**

60. </B500>

The **</B500>** tag is a mandatory record identifying the end of the **Technical Information**.

SGML for Patent Data (continued)

61. <B600>

The **<B600>** record is optional. When present, it identifies the start of **Related U.S. Document Data.** NOTE: Multiple occurrences of Related U.S. Document Data can be present but a <B600> record will only appear one time.

62. <B620><PARENT><CDOC><DNUM>**nnnnnnnn**</DNUM></CDOC><PDOC><DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><CTRY>**aa**</CTRY><KIND>**00**</KIND></PDOC><B650><DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE></B650><PSTA>**nn**</PSTA><PPUB><DNUM>**cccccccc**</DNUM></PPUB></PARENT></B620>

The **<B620>** record is optional. When present it contains the **Division of** a **Related U.S. Document. <PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the **application number** of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. If the application is a U.S. application **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the parent patent application at the time of filing. The 6-position application number will be right justified with leading zeros. If the application is a PCT application **nnnnnnn** represents the 14-position alphanumeric PCT document number, including slashes. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the parent patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. <**CTRY>** is a mandatory tag defining this as a structured country code field. **aa** identifies the country where the parent patent application was filed. If the application is a U.S. application a 2-position alpha constant **US** will be present identifying the United States. If the application is a PCT application a 2-position alpha constant **WO** will be present identifying the World Intellectual Property Organization (WIPO). The country code field is terminated by the mandatory </**CTRY>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The parent application document information is terminated by the mandatory **</PDOC>** end tag. **<B650>** is an optional tag containing **PCT National Stage Information.** It will be

present when the U.S. <PDOC> was filed as an international PCT application. When present it will contain the mandatory **<DNUM>** tag defining this as a structured document number field. The PCT application **nnnnnnn** represents the 14-position alphanumeric PCT document number, including slashes. The document number field is terminated by a mandatory **</DNUM>** end tag. When the PCT National Stage Information is present is must also include a mandatory <**DATE>** tag defining this as a structured date field. **yyyymmdd** identifies the date the PCT National Stage application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory **</DATE>** end tag. The PCT National Information is terminated by a mandatory **</B650>** end tag. **<PSTA>** is a mandatory tag defining the status of the parent application document. **cc** represents the 2-position status code as defined in Figure 6. The status of the parent application document field is terminated by the mandatory **</PSTA>** end tag. The **<PPUB>** is an optional tag identifying publication information if the parent document has been granted a patent or a Statutory Invention Registration (SIR). **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DNUM>** end tag. The publication information is terminated by the mandatory **</PPUB>** end tag. The parent/child relationship is terminated by the mandatory **</PARENT>** end tag. The record is terminated by the mandatory **</B620>** end tag.

Multiple Division of a Related U.S. Document can be present and each occurrence will repeat the <B620> record.

Parent Status Code	Description
00	Pending
01	Patent
03	Abandoned
04	Statutory Invention Registration (SIR)

Note: The code for a pending application will contain 2 spaces.

Figure 6. Parent Status Code

63. <B630>

The **<B630>** record is optional. When present, it identifies the start of **Continuation of and/or Continuation in Part of a Related U.S. Document.**

NOTE: Multiple occurrences of Continuation of and/or Continuation in Part of a Related U.S. Document can be present but a <B630> record will only appear one time.

SGML for Patent Data (continued)

64. <B631><PARENT><CDOC><DNUM>**nnnnnnnn**</DNUM></CDOC><PDOC>
<DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><CTRY>**aa**</CTRY>
<KIND>**00**</KIND></PDOC>><B650><DNUM>**nnnnnnnn**</DNUM><DATE>
yyyymmdd</DATE></B650><PSTA>**nn**</PSTA><PPUB><DNUM>**cccccccc**</DNUM>
</PPUB></PARENT></B631>

The **<B631>** record is optional. When present it contains the **Continuation of a Related U.S. Document. <PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. If the application is a U.S. PCT application **n.……n** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the parent patent application at the time of filing. The 6-position application number will be right justified with leading zeros. If the application is a PCT application **nnnnnnnnn** represents the14-position alphanumeric PCT document number, including slashes. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the parent patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. <**CTRY>** is a mandatory tag defining this as a structured country code field. **aa** identifies the country where the parent patent application was filed. If the application is not a PCT application a 2-position alpha constant **US** will be present identifying the United States. If the application is a U.S. application a 2-position alpha constant **WO** will be present identifying the World Intellectual Property Organization (WIPO). The country code field is terminated by the mandatory <**/CTRY>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The parent application document information is terminated by the mandatory **</PDOC>** end tag. **<B650>** is an optional tag containing **PCT National Stage Information:** It will be present when the U.S. <PDOC> was filed as an international PCT application. When present it will contain the mandatory **<DNUM>** tag defining this as a structured document number field. The PCT application **nnnnnnn** represents the 14-position alphanumeric PCT document number, including slashes. The document number field is terminated by a mandatory **</DNUM>** end tag. When the PCT National Stage Information is present is must also include a mandatory <**DATE>** tag defining this as a structured

date field. **yyyymmdd** identifies the date the PCT National Stage application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory **</DATE>** end tag. The PCT National Information is terminated by a mandatory **</B650>** end tag. **<PSTA>** is a mandatory tag defining the status of the parent application document. **cc** represents the 2-position status code as defined in Figure 5a. The status of the parent application document field is terminated by the mandatory **</PSTA>** end tag. The **<PPUB>** is an optional tag identifying publication information if the parent document has been granted a patent or a Statutory Invention Registration (SIR). **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DNUM>** end tag. The publication information is terminated by the mandatory **</PPUB>** end tag. The parent/child relationship is terminated by the mandatory **</PARENT>** end tag. The record is terminated by the mandatory **</B631>** end tag.

Multiple Continuation of a Related U.S. Document can be present and each occurrence will repeat the <B631> record.

65. <B632><PARENT><CDOC><DNUM>**nnnnnnnn**</DNUM></CDOC><PDOC><DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><CTRY>**aa**</CTRY><KIND>**00**</KIND></PDOC>><B650><DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE></B650><PSTA>**nn**</PSTA><PPUB><DNUM>**cccccccc**</DNUM></PPUB></PARENT></B632>

The **<B632>** record is optional. When present it contains the **Continuation in Part of a Related U.S. Document.** **<PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. If the application is a U.S. PCT application **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the parent patent application at the time of filing. The 6-position application number will be right justified with leading zeros. If the application is a PCT application **nnnnnnn** represents the14-position alphanumeric PCT document number, including slashes. The document number field is terminated by a mandatory **</DNUM>** end tag. **<DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the parent patent application was filed. yyyy will always

contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. <**CTRY>** is a mandatory tag defining this as a structured country code field. **aa** identifies the country where the parent patent application was filed. If the application is a U.S. PCT application a 2-position alpha constant **US** will be present identifying the United States. If the application is a PCT application a 2-position alpha constant **WO** will be present identifying the World Intellectual Property Organization (WIPO). The country code field is terminated by the mandatory </**CTRY>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The parent application document information is terminated by the mandatory **</PDOC>** end tag. **<B650>** is an optional tag containing **PCT National Stage Information:** It will be present when the U.S. <PDOC> was filed as an international PCT application. When present it will contain the mandatory **<DNUM>** tag defining this as a structured document number field. The PCT application **nnnnnnn** represents the 14-position alphanumeric PCT document number, including slashes. The document number field is terminated by a mandatory **</DNUM>** end tag. When the PCT National Stage Information is present is must also include a mandatory <**DATE>** tag defining this as a structured date field. **yyyymmdd** identifies the date the PCT National Stage application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. The PCT National Information is terminated by a mandatory **</B650>** end tag. **<PSTA>** is a mandatory tag defining the status of the parent application document. **cc** represents the 2-position status code as defined in Figure 5a. The status of the parent application document field is terminated by the mandatory **</PSTA>** end tag. The **<PPUB>** is an optional tag identifying publication information if the parent document has been granted a patent or a Statutory Invention Registration (SIR). **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DNUM>** end tag.
The publication information is terminated by the mandatory **</PPUB>** end tag.
The parent/child relationship is terminated by the mandatory **</PARENT>** end tag.
The record is terminated by the mandatory **</B632>** end tag.

Multiple Continuation of a Related U.S. Document can be present and each occurrence will repeat the <B632> record.

66**.** <B633><PARENT><CDOC><DNUM>**nnnnnnn**</DNUM></CDOC><PDOC>
<DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><KIND>**00**</KIND>
</PDOC><PPUB><DNUM>**cccccccc**</DNUM><DATE>**yyyymmdd**</DATE>
</PPUB></PARENT></B633>

The **<B633>** record is optional. When present, it contains the **Continuation Reissue Information of a Related U.S. Document. <PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-position numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right-justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent reissue application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the parent reissue application at the time of its filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date on which the parent reissue application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right-justified with leading zeros, and dd will contain the day right- justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document code. A 2-position numeric constant **00** will be present identifying a patent application. The Kind of Document field is terminated by the mandatory **</KIND>** end tag.
The parent reissue application document information is terminated by the mandatory </**PDOC>** end tag. **<PPUB>** is a mandatory tag identifying publication information about the reissue patent granted from the parent reissue application. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the reissue patent number as defined in Figure 1. The document number field is terminated by a mandatory </**DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the issue date of the reissue patent granted from the parent reissue application. yyyy will always contain a 4-position calendar year, mm will contain the month right-justified with leading zeros, and dd will contain the day right-justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. The reissue patent publication information is terminated by the mandatory **</PPUB>** end tag. The parent/child relationship is terminated by the mandatory **</PARENT>** end tag. The record is terminated by the mandatory **</B633>** end tag.

Multiple Continuation Reissue Information of a Related U.S. Document can be present and each occurrence will repeat the <B633> record.

67. </B630>

The **</B630>** tag is a mandatory record, when a <B630> is present, and identifies the end of

SGML for Patent Data (continued)

Continuation of and/or Continuation in Part of a Related U.S. Document.

68. <B640><PARENT><CDOC><DNUM>**nnnnnnn**</DNUM></CDOC><PDOC>
<DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><KIND>**00**</KIND>
</PDOC><PPUB><DNUM>**cccccccc**</DNUM><DATE>**yyyymmdd**</DATE>
</PPUB></PARENT></B640>

The **<B640>** record is optional. When present it contains the **Reissue Information of a Related U.S. Document.** **<PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the parent patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The parent application document information is terminated by the mandatory **</PDOC>** end tag. The **<PPUB>** is an mandatory tag identifying publication information of the granted patent. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the issue date of the granted patent. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag.The publication information is terminated by the mandatory **</PPUB>** end tag. The parent/child relationship is terminated by the mandatory **</PARENT>** end tag. The record is terminated by the mandatory **</B640>** end tag.

Multiple Reissue Information of a Related U.S. Document can be present and each occurrence will repeat the <B640> record.

SGML for Patent Data (continued)

69. <B641US><PARENT><CDOC><DNUM>**nnnnnnnn**</DNUM></CDOC><PDOC>
<DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><KIND>**00**</KIND>
</PDOC><PPUB><DNUM>**cccccccc**</DNUM><DATE>**yyyymmdd**</DATE>
</PPUB></PARENT><SIBLING><CDOC><DNUM>**nnnnnnnn**</DNUM></CDOC>
<SDOC><DNUM>**nnnnnnnn**</DNUM><KIND>**00**</KIND></SDOC><SPUB>
<DNUM>**nnnnnnnn**</DNUM></SPUB></SIBLING></B641US>

The **<B641US>** record is optional. When present it contains the **Divisional Reissue Information of a Related U.S. Document. <PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the parent patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag. The **<KIND>** tagis mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The parent application document information is terminated by the mandatory **</PDOC>** end tag. The **<PPUB>** is an mandatory tag identifying publication information of the granted patent. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the issue date of the granted patent. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory </**DATE>** end tag.The publication information is terminated by the mandatory **</PPUB>** end tag. The parent/child relationship is terminated by the mandatory **</PARENT>** end tag. **<SIBLING>** is a mandatory tag identifying the Divisional Reissue Sibling Relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position

series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<SDOC>** is a mandatory tag identifying information pertaining to the divisional reissue sibling application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The divisional reissue sibling application document information is terminated by the mandatory **</SDOC>** end tag. The **<SPUB>** is a mandatory tag identifying publication information of the divisional reissue sibling patent. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the patent number as defined in Figure 1. The document number field is terminated by a mandatory **</DNUM>** end tag. The divisional reissue sibling publication information is terminated by the mandatory **</SPUB>** end tag. The sibling relationship is terminated by the mandatory **</SIBLING>** end tag. The record is terminated by the mandatory **</B641US>** end tag.

Multiple Divisional Reissue Sibling Relationships can be present and each occurrence will repeat the <SIBLING> </SIBLING> information.

70. <B645US>a……..a</B645US>

The **<B645US>** record is optional. It will be present when a reissue application was merged with a reexamination proceeding, the issuing document is a reissue patent which shows the following Reexamination results on the reissue patent front page, immediately following the abstract. **90** identifies the series code for a Reexamination Request followed by a slash "/". **nnnnnn** contains the numeric Reexamination Request Number. **yyyymmdd** contains the 8-position filing date. The record is terminated by the mandatory **</B645US>** end tag.

<B645US>**The questions raised in reexamination request No. 90/nnnnnn, filed yyyymmdd have been considered and the results thereof are reflected in this reissue patent which constitutes the reexamination certificate required by 35 U.S.C. 307 as provided in 37 CFR 1.570(e).**</B645US>.

71. <B660><PARENT><CDOC><DNUM>**nnnnnnnn**</DNUM></CDOC><PDOC><DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE><KIND>**00**</KIND></PDOC><PSTA>**03**</PSTA></PARENT></B660>

The **<B660>** record is optional. When present it contains **Substitute Application Information. <PARENT>** is a mandatory tag identifying the parent/child relationship. **<CDOC>** is a mandatory tag containing the application number of the child document, 8-positions numeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. The child document is terminated by the mandatory **</CDOC>** end tag. The **<PDOC>** is a mandatory tag identifying information pertaining to the parent application document. **<DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the patent application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the parent patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros.
The date field is terminated by the mandatory <**/DATE>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-position numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The parent application document information is terminated by the mandatory **</PDOC>** end tag. **<PSTA>** is a mandatory tag defining the status of the parent application document, a 2-positions numeric constant **03** will be present identifying the status of the parent application as abandoned. The status of the parent application document field is terminated by the mandatory **</PSTA>** end tag. **</PARENT>** end tag. The record is terminated by the mandatory **</B660>** end tag.

72. <B680US><DNUM>**nnnnnnnn**</DNUM><DATE>**yyyymmdd**</DATE>
<KIND>**00**</KIND></B675US>

The **<B680US>** record is optional. When present it contains **U.S. Provisional Application Information. <DNUM>** is a mandatory tag defining this as a structured document number field. **nnnnnnnn** represents the 2-position series code as defined in Figure 3, followed by the 6-position application number assigned to the provisional application at the time of filing. The 6-position application number will be right justified with leading zeros. The document number field is terminated by a mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the provisional patent application was filed. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric

constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The record is terminated by the mandatory **</B680US>** end tag. Multiple U.S. Provisional Application Information can be present and each occurrence will repeat the <B680US> record.

73. </B600>

The **</B600>** tag is a mandatory record, when a **<B600>** is present, and identifies the end of the **Related U.S. Document Data.**

74. <B700>

The **<B700>** tag is a mandatory record identifying the start of the **Parties Concerned with the Document.**

75. <B720>

The **<B720>** tag is a mandatory record identifying the start of the **Inventor Information**, and includes at least one <B721US> record.

76. <B721US><NAM><TTL>**c..c**</TTL><FNM>**a…a**</FNM><SNM>**a…a**</SNM>
<SFX>**c…c**</SFX></NAM><ADR><OMC>**c..c**</OMC><PBOX>**c…c**</PBOX>
<STR>**c…c**</STR><CITY>**a…a**</CITY><CNTY>**c…c**</CNTY><STATE>**aa**
</STATE><CTRY>**aa**</CTRY><PCODE>**c..c**</PCODE><EAD>**c…c**<EAD><TEL>
n…n</TEL><FAX>**n…n**</FAX></ADR><RESIDENCE><MILS>**a…a**</MILS>
<CITY>**a…a**</CITY><STATE>**aa**</STATE><CTRY>**aa**</CTRY></RESIDENCE>
< DTXT>**c…c**</DTXT></B721US>

The **<B721US>** record is mandatory and contains **Individual Inventor Information**, variable length alphanumeric. **<NAM>** is a mandatory tag defining the start of the structured inventor name. **<TTL>** is an optional tag and is present when the inventor name includes a title. **c...c** contains the variable length alphanumeric title (e.g., Mr., Mrs., Colonel, Captain). The title field, when present, is terminated by the mandatory **</TTL>** end tag. **<FNM>** is a mandatory tag containing the inventor's first name. **a…a** contains the variable length alphabetic inventor's first name, middle name(s) or initial(s) and any appropriate punctuation. The inventor's first name field is terminated by the mandatory **</FNM>** end tag. **<SNM>** is a mandatory tag containing the inventor's surname. **a…a** contains the variable length alphabetic inventor's last/surname. The surname field is terminated by the mandatory **</SNM>** end tag. **<SFX>** is an optional tag and is present when the individual inventor name includes a suffix. **c...c** contains the variable length alphanumeric suffix (e.g., Jr., Senior, III, Esq., etc.). The suffix field, when present, is terminated by the mandatory **</SFX>** end tag. The entire structured inventor name is terminated by the mandatory **</NAM>** end tag. **<ADR>** is a

mandatory tag defining the start of a structured inventor address. **<OMC>** is an optional tag defining the inventor military post office address. **a……..a** contains the variable length alphanumeric inventor military post office address (e.g. Unit 3400 Box 672 APO AE 09128), (e.g. CMR 467 Box 3081 APO EA 09096), (e.g. S.S.S. Cromelin FFG-37 FPO AP 46662-1492). The inventor military post office address, when present, is terminated by the mandatory **<OMC>** end tag. **<PBOX>** is an optional tag and is present when the inventor address includes a post office box and when an <OMC> field is not present. **c…c** contains the variable length alphanumeric post office box number. The post office box field, when present, is terminated by the mandatory **</PBOX>** end tag. The **<STR>** is an optional tag and is present when the inventor address includes a street address and when an <OMC> field is not present. **c….c** contains the variable length alphanumeric street address. The street address, when present, is terminated by the mandatory **</STR>** end tag. **<CITY>** is a mandatory tag defining a structured city name field for the inventor address. The <CITY> field is not present when an <OMC> field is present. **a…a** contains the variable length alphabetic city name. The city name field is terminated by the mandatory **</CITY>** end tag. **<CNTY>** is an optional tag and is present when the inventor address includes a county or regional area and when an <OMC> field is not present. **c…c** contains the variable length county, parish or a regional area (e.g. Canadian provinces) etc. The county field, when present, is terminated by the mandatory **</CNTY>** end tag. **<STATE>** is an optional tag and is present when the inventor address is in the United States or one of its territories and when an <OMC> field is not present. **aa** identifies the 2-position State Code. Reference Appendix E - Two-Character Codes for U.S. States and Territories. The state code field, when present is terminated by the mandatory </**STATE**> end tag. <**CTRY**> is a mandatory tag defining this as a structured country code field for the inventor address. The <CTRY> field is not present when an <OMC> field is present. **aa** identifies the inventor address 2-position alphabetic country code. Reference Appendix D – Two-Character Codes for Countries and Intergovernmental Organizations. The inventor address country code field is terminated by the mandatory </**CTRY**> end tag. **<PCODE>** is an optional tag and is present when the inventor address includes a postal code. **c..c** contains the variable length alphanumeric postal code. The postal code field, when present, is terminated by the mandatory **</PCODE>** end tag. **<EAD>** is an optional tag and is present when the inventor address includes an electronic address. **c…c** contains the variable length address (e.g., e-mail). The electronic address field, when present, is terminated by the mandatory **</EAD>** end tag. **<TEL>** is an optional tag and is present when the inventor address includes a telephone number. **n…n** contains the variable length number. The telephone number field, when present, is terminated by the mandatory **</TEL>** end tag. **<FAX>** is an optional tag and is present when the inventor address includes a fax number. **n…n** contains the variable length fax telephone number. The fax number field, when present, is terminated by the mandatory **</FAX>** end tag. The entire inventor address is terminated by the mandatory **</ADR>** end tag. **<RESIDENCE>** is an optional tag defining the inventor residence. **<MILS>** is an optional tag that identifies the branch of service when the inventor residence is the U.S. military. **c….c** contains the variable length alphabetic

branch of service. Possible contents are; USA for the U.S. Army, USN for the U.S. Navy, USAF for the U.S. Air Force, USMC for the U.S. Marine Corps and USCG for the U.S. Coast Guard. The inventor military residence field is terminated by the mandatory <**/MILS>** end tag. **<CITY>** is an optional tag defining a structured residence city name field and is present when a <MILS> field is not present. **a…a** contains the variable length alphabetic city name. The residence city name field, when present, is terminated by the mandatory **</CITY>** end tag. **<STATE>** is an optional tag and is present when a <MILS> field is not present and when the inventor residence is in the United States or one of its territories. **aa** identifies the 2-position State Code. Reference Appendix E - Two-Character Codes for U.S. States and Territories. The inventor residence state code field, when present, is terminated by the mandatory <**/STATE>** end tag. <**CTRY>** is a tag defining this as a structured country code field and is present when a <MILS> field is not present. **aa** identifies the inventor residence 2-position alphabetic country code. Reference Appendix D – Two-Character Codes for Countries and Intergovernmental Organizations. The structured country code field is terminated by the mandatory **</CTRY>** end tag. The inventor residence, when present, is terminated by the mandatory **</RESIDENCE>** end tag. **<DTXT>** is an optional tag and is present when additional inventor descriptive text is provided. **c…c** contains the variable length text such as "deceased", "administrator" of an estate, etc. The descriptive text field, when present, is terminated by the mandatory **</DTXT>** end tag. The record is terminated by the mandatory **</B721US>** end tag.

Multiple Inventors can be present and each occurrence will repeat the <B721US> record.

77.</B720>

The **</B720>** tag is a mandatory record and identifies the end of the **Inventor Information.**

78. <B730>

The **<B730>** record is optional. When present, it identifies the start of **Assignee Information.**

79. <B731><ONM>**a……a**</ONM><FNM>**a……a**</FNM><SNM>**a……a**</SNM><SFX>**c…c**</SFX><ADR><CITY>**a……a**</CITY><STATE>**aa**</STATE><CTRY>**aa**</CTRY></ADR><DTXT>**c…c**</DTXT></B731>

The **<B731>** record is optional. When present, it contains **Assignee Name/Address Information,** variable-length alphanumeric. **<ONM>** is an optional tag beginning the Assignee Organization Name field, present when the assignee is a company, corporation, government entity, institution, etc. **a……a** contains the organization's variable-length alphanumeric name. The Assignee Organization Name field, when present, is terminated by the mandatory **</ONM>** end tag. **<FNM>** is an optional tag beginning the Assignee First Name field,

present when the assignee is an individual. **a……a** contains the individual assignee's variable-length alphanumeric first name, middle name(s) or initial(s) and any appropriate punctuation. The Assignee First Name field, when present, is terminated by the mandatory **</FNM>** end tag. **<SNM>** is an optional tag beginning the Assignee Surname field, present when the assignee is an individual. **a……..a** contains the individual assignee's variable-length alphanumeric surname. The Assignee Surname field, when present, is terminated by the mandatory **</FNM>** end tag. **<SFX>** is an optional tag beginning the Assignee Suffix field, present when the individual assignee name includes a suffix. **c...c** contains the variable-length alphanumeric suffix (e.g., Jr., Senior, III, Esq., etc.). The Assignee Suffix field, when present, is terminated by the mandatory **</SFX>** end tag. **<ADR>** is an optional tag and defines the start of the structured Assignee Address. **<CITY>** is a mandatory tag defining a structured Assignee City Name field. **a……a** contains the variable-length alphabetic city name. The Assignee City Name field is terminated by the mandatory **</CITY>** end tag. **<STATE>** is an optional tag beginning the Assignee State Code field, present when the assignee address is in the United States or one of its territories. **aa** identifies the 2-position State Code, as shown in Reference Appendix E – Two-Character Codes for U.S. States and Territories. The Assignee State Code field, when present, is terminated by the mandatory </**STATE**> end tag. The <**CTRY>** is a mandatory tag defining this as a structured Assignee Country Code field. **aa** identifies the assignee address country code, as shown in Reference Appendix D – Two-Character Codes for Countries and Intergovernmental Organizations. The Assignee Country Code field is terminated by the mandatory </**CTRY**> end tag. The entire Assignee Address is terminated by the mandatory **</ADR>** end tag. **<DTXT>** is an optional tag beginning the Assignee Descriptive Text field, present when additional assignee descriptive text is provided. **c…c** contains the variable length text such as "deceased", "administrator" of an estate, etc. The Assignee Descriptive Text field, when present, is terminated by the mandatory **</DTXT>** end tag. The Assignee Name/Address Information record is terminated by the mandatory **</B731>** end tag.

80. <B732US>**nn**</B732US>

The **<B732US>** record containing the **Assignee Type** is mandatory whenever a <B731> Assignee Name/Address Information record is present. **nn** contains a 2-position numeric Assignee Type Code as defined in Figure 7. The Assignee Type record is terminated by the mandatory **</B732US>** end tag.

Multiple assignees can be present. For each assignee there will be a <B731> Assignee Name/Address Information record and a <B723US> Assignee Type record.

81. </B730>

The **</B730>** tag is a mandatory record, when a <B730> is present, and identifies the end of the **Assignee Information.**

Assignee Type Code	Description
02	United States Company or Corporation
03	Foreign Company or Corporation
04	United States Individual
05	Foreign Individual
06	United States Government
07	Foreign Government
08	County Government (U.S.)
09	State Government (U.S)

Note: A "1" appearing in position-1 would denote part interest.

Figure 7. Assignee Type Code

82.<B740><ONM>

The **<B740>** record is optional. When present, it identifies the start of the **Legal Representative Information**, and includes at least one <B741> record.

83. <B741><ONM>**a……a**</ONM><FNM>**a……a**</FNM><SNM>**a……a**</SNM><SFX>**c…c**</SFX></B741>

The **<B741>** record containing **Legal Representative Name** is mandatory whenever a <B740> Legal Representative Information record is present. **<ONM>** is an optional tag beginning the Legal Representative Firm/Organization Name field. When present, it will contain the name of the legal representative's firm/organization. **a……a** contains the complete variable-length alphanumeric firm/organization name, including any suffixed designation (for example, "P.C.," "Ltd.," "and Associates"). The Legal Representative Firm/Organization Name field, when present, is terminated by the mandatory **</ONM>** end tag. **<FNM>** is an optional tag beginning the Legal Representative First Name field, present when the legal representative is an individual. **a……a** contains the individual's variable-length alphabetic first name, middle name(s) or initial(s) and any appropriate punctuation. The Legal Representative First Name field, when present, is terminated by the mandatory **</FNM>** end tag. **<SNM>** is an optional tag beginning the Legal Representative Surname field, present when the legal representative is an individual. **a……a** contains the individual's variable-length alphabetic surname. The Legal Representative Surname field, when present, is terminated by the mandatory **</SNM>** end tag. **<SFX>** is an optional tag beginning the Legal Representative Suffix field, present when the legal representative is an individual whose name includes a suffix. **c…c** contains the individual's variable-length alphanumeric suffix (e.g., Jr., Senior, III, Esq., etc.). The Legal Representative Suffix field, when present, is terminated by the mandatory **</SFX>** end tag. The Legal Representative Name record is terminated by the mandatory **</B741>** end tag.

Up to 3 legal representatives can be present in the Legal Representative Information and each occurrence will repeat a <B741> Legal Representative Name record. The Legal Representative Information can consist of a firm, or a firm and 1 individual, or a firm and 2 individuals, or 1, 2 or 3 individuals.

84. </B740>

The </B740> tag is a mandatory record, when a <B740> is present, and identifies the end of the **Legal Representative Information.**

85. <B745>

The **<B745>** tag is a mandatory record and identifies the start of the **USPTO Persons Acting Upon the Document.**

86. <B746><FNM>**a……a**</FNM><SNM>**a……a**</SNM></B746>

The **<B746>** record is a mandatory and contains the **Primary Examiner,** variable length alphanumeric. **<FNM>** is a mandatory tag containing the first name of the primary examiner. **a……a** contains the variable length alphabetic primary examiner's first name, middle name(s) or initial(s) and any appropriate punctuation. The first name field is terminated by the mandatory **</FNM>** end tag. **<SNM>** is a mandatory tag containing the surname primary examiner. **a…..a** contains the variable length alphabetic primary examiner's last/surname. The surname field is terminated by the mandatory **</SNM>** end tag. **<SFX>** is an optional tag and is present when the primary examiner's name includes a suffix. **c……c** contains the variable length alphanumeric suffix (e.g., Jr., Senior, III, Esq., etc.). The suffix field, when present, is terminated by the mandatory **</SFX>** end tag. The record is terminated by the mandatory **</B746>** end tag.

87. <B747><FNM>**a……a**</FNM><SNM>**c……c**</SNM></B747>

The **<B747>** is an optional record. When present, is contains the **Assistant Examiner,** variable length alphanumeric. **<FNM>** is a mandatory tag containing the first name of the assistant examiner. **a……a** contains the variable length alphabetic assistant examiner's first name, middle name(s) or initial(s) and any appropriate punctuation. The first name field is terminated by the mandatory **</FNM>** end tag. **<SNM>** is a mandatory tag containing the surname assistant examiner. **a…..a** contains the variable length alphabetic assistant examiner's last/surname. The surname field is terminated by the mandatory **</SNM>** end tag. **<SFX>** is an optional tag and is present when the assistant examiner's name includes a suffix. **c……c** contains the variable length alphanumeric suffix (e.g., Jr., Senior, III, Esq., etc.). The suffix field, when present, is terminated by the mandatory **</SFX>** end tag. The record is terminated by the mandatory **</B747>** end tag.

SGML for Patent Data (continued)

Multiple Assistant Examiners can be present and each occurrence will repeat the <B747> record.

88. <B748US>**n….n**</B748US>

The **<B748US>** record is mandatory and contains the **Technology Center (Group) Art Unit,** variable length numeric. **n….n** defines the Technology Center, Industry Sector, Art Unit or other grouping of examiners that examined this patent document. The record is terminated by the mandatory **</B748US>** end tag.

89. </B745>

The **</B745>** tag is a mandatory record and identifies the end of the **USPTO Persons Acting Upon the Document.**

90. </B700>

The **</B700>** tag is a mandatory record identifying the end of the **Parties Concerned with the document.**

91. <B800>

The **<B800>** record is optional. When present, it identifies the application as being filed under the **Patent Cooperation Treaty (PCT)** and includes the mandatory <B860>, <B861>, <B863>, <B864>, <B870> and <B871> records.

92. <B860>

The **<B860>** tag is a mandatory record identifying the start of **PCT Filing Information.**

93.<B861><DNUM>**ccccccc**</DNUM><DATE>**yyyymmdd**</DATE><CTRY>**WO**</CTRY><KIND>**00**</KIND></B861>

The **<B861>** record is mandatory and contains **PCT Filing Document Identification**, fixed length alphanumeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccc** represents the 14-position alphanumeric PCT document number, including slashes. The document number field is terminated by the mandatory **<DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the PCT filing date. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The <**CTRY>** is a mandatory tag defining this as a structured country code field.

SGML for Patent Data (continued)

A 2-position alpha constant **WO** will be present identifying the World Intellectual Property Organization (WIPO). The country code field is terminated by the mandatory <**/CTRY>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions numeric constant **00** will be present identifying a patent application. The kind of document field is terminated by the mandatory **</KIND>** end tag. The record is terminated by the mandatory **</B861>** end tag.

94. <B863><DATE>**yyyymmdd**</DATE></B863>

The **<B863>** record is mandatory and contains the **35 U.S.C. 371 Date**, 8-positions numeric. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the date the PCT application meets US application filing requirements. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The record is terminated by the mandatory **</B863>** end tag.

95. <B864><DATE>**yyyymmdd**</DATE></B864>

The **<B864>** record is mandatory and contains the **35 U.S.C. 102 (e) Date**, 8-positions numeric. <**DATE>** is a mandatory tag defining this as a structured date field. **yyyymmdd** identifies the PCT application's prior art effective date. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the mandatory <**/DATE>** end tag. The record is terminated by the mandatory **</B864>** end tag.

96. </B860>

The **</B860>** tag is a mandatory record identifying the end of the **PCT Filing Information.**

97. <B870>

The **<B870>** tag is a mandatory record identifying the start of the **PCT Publication Information.**

98.<B871><DNUM>**cccccc**</DNUM><DATE>**yyyymmdd**<DATE>
<CTRY>**WO**<CTRY><KIND>**A** </KIND></B871>

The **<B871>** record is mandatory and contains **PCT Publication Document Identification**, fixed length alphanumeric. **<DNUM>** is a mandatory tag defining this as a structured document number field. **cccccccc** represents the PCT publication number, formatted as defined in Figure 1. The document number for foreign references can be variable length alphanumeric. The document number field is terminated by the mandatory **</DNUM>** end tag. <**DATE>** is a mandatory tag defining this as a structured date field. identifies the **yyyymmdd** issue date

of the PCT publication. yyyy will always contain a 4-position calendar year, mm will contain the month right justified with leading zeros and dd will contain the day right justified with leading zeros. The date field is terminated by the
mandatory <**/DATE>** end tag. The <**CTRY>** is a mandatory tag defining this as a structured-country code field. A 2-position alpha constant **WO** will be present identifying the World Intellectual Property Organization (WIPO). The country code field is terminated by the mandatory <**/CTRY>** end tag. The **<KIND>** tag is mandatory and contains the Kind of Document, a 2-positions constant, **an upper case A followed by a trailing space**, will be present identifying a first level publication. The kind of document field is terminated by the mandatory **</KIND>** end tag. The record is terminated by the mandatory **</B871>** end tag.

99. </B870>

The **</B870>** tag is a mandatory record identifying the end of the **PCT Publication Information.**

100. </B800>

The **</B800>** tag is a mandatory record, when a <B800> is present, and identifies the end of the **Patent Cooperation Treaty (PCT**) Information**.**

101. </SDOBI>

The **</SDOBI>** tag is a mandatory record identifying the end of the **Bibliographic Information** sub-document.

102. <SDOAB>

The **<SDOAB>** tag is a mandatory record identifying the start of the **Abstract Information** sub-document.

The abstract is a short narrative summary of the technical disclosure of a patent application, including “that which is new in the art to which the invention pertains”.

The contents of an abstract can appear as one or more header records (Reference Table 1 - Header Record), paragraph records (Reference Table 2 - Paragraph Record).

103. </SDOAB>

The **</SDOAB>** tag is a mandatory record identifying the end of the **Abstract Information** sub-document.

SGML for Patent Data (continued)

104. <SDODE>

The **<SDODE>** tag is a mandatory record identifying the start of the **Description Information** sub-document.

The description information is that portion of the specification of the patent that includes the reference to prior related application(s) <RELAPP>, the government interest statement <GOVINT>, the brief summary of the invention <BRFSUM>, the brief description of the drawings <DRWDESC>, and the detailed description of the invention <DETDESC>.

The contents of the description information can appear as one or more header records (Reference Table 1 - Header Record), paragraph records (Reference Table 2 - Paragraph Record), and embedded image records.

NOTE: All patent document numbers that are present within the Description Information sub-document must appear within the mandatory **<DNUM> </DNUM>** tags, defining a structured document number field.

105. <RELAPP>

The **<RELAPP>** record is optional. When present it will contain the text of the **Reference to Prior Related Application(s)** and will include one or more of the following: a reference to prior related U.S. application(s) and/or international (PCT) application(s) in which reference each child application is stated to be a continuation, division, or continuation-in-part of a parent application; a reference to other prior related application(s) when no specific type of relationship is stated between parent and child applications; a reference to prior U.S. provisional application(s) on which a domestic priority claim is being based; a reference to a prior U.S. application of which the present application is a substitute (although such a reference is not required in a substitute application); and a reference to the fact that the present application is the U.S. national stage of an international (PCT) application (although such a reference is not required in a U.S. national stage application). In a divisional reissue, this record will contain a reference to each “sibling” divisional reissue. In a continuation reissue, this record will contain a reference to the parent reissue application. When the Reference to Prior Related Application(s) is present, the record is terminated by the mandatory **</RELAPP>** end tag.

106. <GOVINT>

The **<GOVINT>** record is optional. When present it will contain the text of the **Government Interest Statement** and will contain a description of the U.S. government’s rights with respect to the invention, such as a reference to a U.S. government contract, a reference to a U.S. government agency, and/or a reference to the U.S. government’s retention of licensing rights. When the Government Interest Statement is present, the record is terminated by the

mandatory **</GOVINT>** end tag.

107. <BRFSUM>

The **<BRFSUM>** record is optional. When present it will contain the text of the **Brief Summary of the Invention** and will contain information about the background of the invention and/or will contain a description of the prior art and/or will present a brief summary of the invention. In addition, the following kinds of information, when present, must appear at the beginning of the <BRFSUM> record: a reference to a microfiche appendix, a reference to the "foregoing abstract," and/or (when relevant) the prescribed authorization language beginning "A portion of the disclosure of this patent document contains material which is subject to (copyright or mask work) protection …." When the Brief Summary of the Invention is present, the record is terminated by the mandatory **</BRFSUM>** end tag.

108. <DRWDESC>

The **<DRWDESC>** record is optional. When present it will contain the text of the **Brief Description of the Drawings** and will briefly describe each formal drawing. When at least one drawing was filed in color, this record must begin with prescribed language beginning "The file of this patent contains at least one drawing executed in color …." When the Brief Description of the Drawings is present, the record is terminated by the mandatory **</DRWDESC>** end tag.

109. <DETDESC>

The **<DETDESC>** record is mandatory and contains the text of the **Detailed Description of the Invention** and will contain such information as the following: a complete description of the invention, a description of the preferred embodiment of the invention, and/or a description of the particular parts of the invention. The Detailed Description of the Invention is the most likely location for tables, complex equations, and complex formulas. In addition, the Detailed Description of the Invention record will contain any computer program listing that is being included in its entirety as part of the patent specification; and the Detailed Description of the Invention record will contain any nucleotide and/or amino acid sequence listing that is being included as part of the patent specification. The Detailed Description of the Invention record will be terminated by the mandatory **</DETDESC>** end tag.

110. </SDODE>

The **</SDODE>** tag is a mandatory record identifying the end of the **Description Information** sub-document.

SGML for Patent Data (continued)

111. <SDOCL>

The **<SDOCL>** tag is a mandatory record identifying the start of the **Claim Information** sub-document.

The claim information contains one or more claim. Each claim is a one-sentence definition or identification which specifically points out and distinctly sets forth the subject matter which the applicant regards as his invention or discovery. The contains of the claim information will appear as one header record that contains the initial claim statement (Reference Table 1 - Header Record), Claim List (Reference Table 3 - Claim List). The Claim List may contain one or more paragraph records (Reference Table 2 - Paragraph Record).

112. </SDOCL>

The **</SDOCL>** tag is a mandatory record identifying the end of the **Claim Information** sub-document.

113. <SDODR>

The **<SDODR>** tag is a optional record identifying the start of the **Drawing Information** sub-document.

One TIFF Image and an embedded image record will be present for each drawing Sheet of the patent. (Reference Appendix F - Complex Work Units, 4. Tagged Image File Format (TIFF) Images

114. </SDODR>

The **</SDODR>** tag is a mandatory record, when a <SDODR is present, and identifies the end of the **Drawing Information** sub-document.

115. <SDOCR>

The **<SDOCR>** tag is a optional record identifying the start of the **OCR'ed Unstructured Bibliographic Legacy Text Information** sub-document.

This data will only be present when unstructured bibliographic legacy text has been captured through an OCR effort.

116. </SDOCR>

The **</SDOCR>** tag is a mandatory record, when a <SDODR is present, and identifies the end of the **OCR'ed Unstructured Bibliographic Legacy Text Information** sub-document.

SGML for Patent Data (continued)

Table 1 -- Header Record

<H lvl=**n** align="**clr**">**header data content**</H>

The optional header record, when present, will contain a title for paragraph content. A header has a level attribute, (i.e., a book title could be level 1, a chapter title could be level 2, and a section title could be level 3); and an alignment attribute that defines the header data content justification. The start header tag <H lvl=**n** align="**clr**"> defines the header level and alignment attributes, where lvl=**n** defines the numeric header level (n=1,2,3), and where align="**clr**" defines the text alignment within the current line (**clr** = center, left, or right). If the alignment attribute is omitted, then left is assumed. The **header data content** of a header record can be ASCII text to include any of the following and is terminated by the mandatory </H> end tag.

[2] Special character data. Reference Appendix G - Special Characters.
[2] Mathematical equations. Reference Appendix F Complex Work Units, Item 2. Mathematical Equations.

Example of Header Records

<H lvl=1>BACKGROUND OF THE INVENTION</H>

<H lvl=1 align="center">SUMMARY OF THE INVENTION</H>

<H lvl=1 align="center">BRIEF DESCRIPTION OF THE DRAWINGS</H>

Figure 8.

SGML for Patent Data (continued)

Table 2 -- Paragraph Record

<P id="P-**n**">**paragraph data content**</P>

The optional paragraph record will contain the composition of text as well as complex work units (tables, mathematical equations, chemical structures, diagrams or formulae), and images. The start paragraph tag <P id="P-**n**"> identifies the beginning of a paragraph where the **n** of P-**n** is a unique variable length numeric paragraph number. The **paragraph data content** of a paragraph record can be ASCII text and include any of the following and is terminated bythe mandatory </P> end tag.

- Special character data. Reference Appendix G - SpecialCharacters.
- Chemical structures. Reference Appendix F - Complex Work Units, Item 1. Chemical Structures Diagrams/Formulae.
- Mathematical Equations. Reference Appendix F - Complex Work Units, Item 2. Mathematical Equations.
- Tables. Reference Appendix F - Complex Work Units, Item 3. Tables.
- Tagged Image File Format (TIFF) Images. Reference Appendix F - Complex Work Units, Item 4. Tagged Image File Format (TIFF) Images.

Lists, Changes and Footnotes. Reference Appendix H - Additional Data Structures.

Note: Each paragraph is considered a physical record and will be terminated by an ASCII linefeed (Hex "0A") character. The use of certain SGML tagged data within a paragraph can also be considered a physical record and will contain a linefeed character. Therefore, a paragraphs can contain physical records with physical records.

Example of Paragraph records

<P id="P-1">The present invention relates to a hybrid boat and underwater watercraft for recreational touring both under and on the surface of a body of water.</P>

<P id="P-2">Various forms of underwater craft are known. The known craft utilize various forms of ballast techniques and apparatus in order to adjust buoyancy, various forms of propulsion, and various forms of stabilization systems. Such underwater crafts are described, for example, in U.S. Patent Numbers 4,577,583, 4,721,055 and 4,938,164</P>

<P id="P-28">The coupling reaction at the metal alkoxide of baccatin is typically carried out by adding a solution of **&bgr;**-lactam in a dry non-protic organic solvent in a preferred temperature range from -100**°** C. to 50**°** C.</P>

<P id="P-144">R**<SB>**7**</SB>** is selected from a group consisting of benzoyl and cyclohexanecarbonyl;</P>

Figure 9.

Table 3 – Claim List

Each patent will contain a mandatory Claim List that will contain one or more claims.

Note: A mandatory claim statement, i.e. 'What is Claimed is:', 'We Claim:', 'I Claim:', will be present and appear as a header record before the <CL> claim list record. Design Patents will not contain a claim statement. Reference Figure 9 - Example of Claim Information.

<CL>
<CLM id="CLM-**n…n**">
The first sequential claim of the claim list consisting of paragraph records and embedded image records.
</CLM>
The next sequential claim, if multiple claims are present in the claim list.
</CL>

———

<CL>

The **<CL>** tag is a mandatory record identifying the beginning of the Claim List.

<CLM id="CLM-**n…n**">

The <CLM id="CLM-**n…n**"> record is mandatory and contain the claim number of the subsequent individual claim, variable length numeric. **n….n** represents the sequential claim number.

The data content of the claim will reside here and appear as paragraph records (Reference Table 2 - Paragraph Record), and embedded image records (Reference Table 3 - Embedded Image Record).

</CLM>

The **</CLM>** tag is a mandatory record identifying the end of an individual Claim.

NOTE: If multiple claims are present in the claim list each sequential claim will reside at this location.

</CL>

The **</CL>** tag is a mandatory record identifying the end of the Claim List.

SGML for Patent Data (continued)

Example of Claim Information

<SDOCL>
<H lvl=1>I claim:</H>
<CL>
<CLM id="CLM-1">
<P id="P-96">An electronic camera, comprising:</P>
<P id="P-97">A camera body;</P>
<P id="P-98">A plurality of image pickup devices immovably positioned in said camera body;</P>
<P id="P-99">A photographing optical system;</P>
<P id="P-100">A finder optical system; and</P>
<P id="P-101">An optical element movable, with respect to said finder optical system and said plurality of image pickup devices, between a first position in which a bundle of light transmitted through said photographing optical system is made incident upon said finder optical system and a second position in which said bundle of light transmitted through said photographing optical system is split into beams, said split beams being made incident onto each of said plurality of image pickup devices, said optical element being formed so that a plane formed by said bundle of incident light to said finder optical system is normal to a plane formed by said bundle of incident light to each of said plurality of image pickup devices.</P>
</CLM>
<CLM id="CLM-2">
<P id="P-101">An electronic camera according to claim 1, further comprising detecting means for detecting a displacement of said optical element, so that the movement of said optical element can be controlled in accordance with a detection signal outputted by said detecting means.</P>
</CLM>
</CL>
</SDOCL>

Figure 10.