Title: DOCUMENT PROCESSING AND MANAGEMENT APPROACH TO EDITING A DOCUMENT IN A MARKUP LANGUAGE ENVIRONMENT USING UNDOABLE COMMANDS

Abstract: A method of creating a new XML document having at least a root element and a declaration. The method comprises retrieving from storage a new fragment XML document comprising at least one XML template for a new XML file that itself has a root element. Then, at least one XML template is selected and the selected XML template is used to create an XML document. User and programmer interfaces, as well as device and system structures that can implement the method, also are provided.
### INTERNATIONAL SEARCH REPORT

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC:** G06F 15/00 (2006.01)

**USPC:** 715/511, 513, 514, 530, 531

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

- U.S.: 715/511, 513, 514, 530, 531

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Alotta, "IDE, Integrated Development Environment, User and Reference Manual Version 4.4."

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
</table>

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

**Date of the actual completion of the international search**

09 October 2006 (09.10.2006)

**Date of mailing of the international search report**

30 Nov 2006

**Name and mailing address of the ISA/US**

Mail Stop PCT, Attn: ISA/US Commissioner for Patents

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Alexandria, Virginia 22313-1450

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Form PCT/ISA/210 (second sheet) (April 2005)
**INTERNATIONAL SEARCH REPORT**

**Box No. II**  
**Observations where certain claims were found unsearchable** *(Continuation of Item 2 of first sheet)*

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:  
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:  
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III**  
**Observations where unity of invention is lacking** *(Continuation of Item 3 of first sheet)*

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1. ☑ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

☐ The additional search fees were accompanied by the applicant’s protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant’s protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

*Form PCT/ISA/210 (continuation of first sheet(2)) (April 2005)*
BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

The International Search Authority has found 3 inventions claimed in the International Application covered by the claims indicated below:

This applications contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I. Claims 1-11, 14-23, 25-34, 36-37, and 39-48, drawn to a method of providing for undoing an XML document represented as a DOM by creating an edit instruction corresponding to the detected change in the DOM.

Group II. Claims 12-13, 24, 35, and 49-50, drawn to a method of providing for undoing an XML document represented as a DOM by creating a mutation event corresponding to the detected change in the DOM.

Group III. Claim 38, drawn to a method of providing for undoing an XML document represented as a DOM by using a plurality of templates for predetermined commands.

1. This International Searching Authority considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2, and 13.3) for the reasons indicated below:

The inventions listed as Groups I, II, and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of the Group I invention is the claimed edit instruction method, system, device, user interface, and storage medium, and this feature is not present in Groups II or III.

The special technical feature of the Group II invention is the claimed mutation event method, system, device, and storage medium, and this feature is not present in Groups I or III.

The special technical feature of the Group III invention is the claimed predetermined templates programmer interface, and this feature is not present in Groups I or II.
Therefore, unity of invention is lacking