

updating presentation of the report, so that said certain page continues to be displayed with correct data records.

11. In a computer system having a database storing a plurality of data records, a method for creating a "live" report of said database, the method comprising:

- (a) for each data record, storing in a B-tree information describing record geometry for presenting each said data record in the report, said b-tree comprising a plurality of nodes, each node storing an accumulated record count together with an accumulated record geometry for records of nodes beneath said each node
- (b) receiving a request for displaying a certain page of the report;
- (c) determining which particular data records fall on said certain page by traversing the B-tree for accumulating record geometries having a distance equal to or greater than a distance from said certain page from one end of the report; and
- (d) presenting the report to a user by rendering on a display device said particular data records determined in step (c) to fall on said certain page.

12. The method of claim 11, wherein said step (c) further includes:

storing a running total of accumulated record geometries; as each node is visited, adding the record geometries stored by the node to said running total so long as the running total does not exceed the distance from said certain page from one end of the report.

13. The method of claim 11, wherein said record geometry comprises a width required for displaying a particular record in the report.

14. The method of claim 11, wherein said record geometry comprises width and height required for displaying a particular record in the report.

15. The method of claim 11, wherein each data record comprises a plurality of data fields, at least some of the data fields storing a variable amount of database information.

16. The method of claim 15, wherein each data record further comprises a variable number of nested detail data records.

17. The method of claim 16, wherein each nested detail data record itself comprises a plurality of data fields.

18. In a computer system having a database storing a plurality of data records, a method for creating a "live" report of said database, the method comprising:

- (a) for each data record, storing with the database information describing record geometry required for presenting each said data record in the report;
- (b) receiving a request for displaying a certain data record on the report;
- (c) determining from said stored record geometries on which particular page of the report said certain data record falls by traversing the B-tree for accumulating record counts until a record count is reached which is equal to said certain data record, storing a running total of accumulated record geometries, and, as each node is visited, adding the record geometries stored by the node to said running total so long as the running total does not exceed the distance from said certain page from one end of the report; and
- (d) presenting the report to a user by rendering on a display device said particular page determined in step (c) to be the particular page on which said certain data record falls.

19. The method of claim 18, wherein said record geometry comprises volume required for displaying a particular record in the report.

20. The method of claim 18, wherein said record geometry comprises a height required for displaying a particular record in the report.

21. The method of claim 18, wherein step (a) includes: storing a B-tree with said database, said B-tree having leaf nodes pointing to particular database records in the database, and wherein each node in the B-tree stores an accumulated record geometry, for records of nodes beneath it.

22. The method of claim 21, wherein each node in the B-tree also stores an accumulated record count for records of nodes beneath it.

23. The method of claim 22, wherein step (c) includes: determining on which page said certain data record falls by:

- (i) traversing said B-tree for accumulating record counts stored at nodes of the B-tree, and
- (ii) upon accumulating a record count which is equal to a record number for said certain data record, reading from the B-tree the accumulated volume pointed to by the B-tree at that accumulated record count.

24. The method of claim 23, wherein substep (i) includes: starting from a root node of the B-tree, traversing nodes of the B-tree until accumulated record counts stored by nodes which have been traversed equal a record number required to reach said certain data record of the report.

25. The method of claim 18, wherein no data record is allowed to straddle a page boundary of the report.

26. The method of claim 18, wherein step (b) includes converting said request for displaying a certain data record of the report into a request for displaying a portion of the report at a location positioned a certain number of data records from one end of the report.

27. The method of claim 26, wherein said certain data record is specified by a record number for said data record, said record number indicating a position for said data record in said database relative to all data records.

28. The method of claim 18, further comprising:

receiving user input for modifying a particular data record; and

in response to said user input, updating the information describing record geometry required for presenting said particular data record.

29. The method of claim 28, further comprising:

re-determining from the updated stored record geometries on which particular page of the report said certain data record falls; and

updating presentation of the report, so that said certain data record continues to be displayed on the correct page of the report.

30. The method of claim 18, wherein said record geometry comprises a width required for displaying a particular record in the report.

31. The method of claim 18, wherein said record geometry comprises width and height required for displaying a particular record in the report.

32. The method of claim 18, wherein each data record comprises a plurality of data fields, at least some of the data fields storing a variable amount of database information.

33. The method of claim 32, wherein each data record further comprises a variable number of nested detail data records.

34. The method of claim 33, wherein each nested detail data record itself comprises a plurality of data fields.