[0007] As the number of users on a given platform grows the computing demands placed upon the server-side of the platform (as distinct from the client-side defined by the user devices) rapidly increases. While this is particularly exacerbated for those platforms accommodating multiple forms of comments, is also problematic for even relatively simple forms of comments such as the thumbs-up and thumbs-down style comments. The typical processing bottlenecks include: updating a database with the most recently made comments; and subsequently accessing that database to generate the most up-to-date data for the users. While this problem may be ameliorated temporarily through deploying more computing power on the server-side of the platform, a rapid rise in user numbers, coupled with the demand from the platforms for real-time updates and many additional complex functionalities, has resulted in an ongoing technical issue to address for such platforms.

[0008] Accordingly, there is a need for improved systems, methods and data structures for allowing users to electronically post comments.

Summary

[0009] It is an object of the preferred embodiments of the present disclosure to overcome or ameliorate at least one of the disadvantages of the prior art, or to provide a useful alternative.

[0010] According to a first aspect of the present disclosure there is provided a system for allowing first users to electronically post with first user devices respective comments relating to posted content provided by a second user with a second user device, the system including:

an interface for:

receiving: the posted content from the second user device; the comments from the respective first user devices; and requests from the user devices for selected posted data; and

allowing the selected posted data to be directed to the user devices in response to the respective requests from those devices;

a database for storing: content data that is derived from the posted content, wherein the content data includes a content field that is indicative of the content and a count field for storing count data; and comment data that is derived from the comments;

a count engine that is responsive to the interface receiving comments from the respective first user devices for selectively: determining a count of the comments made by the first users; and updating the count field to be indicative of the count; and

a publishing engine that is responsive to the requests for selected posted data accessing the content data and the comment data to generate the selected posted data.

[0011] In an example the count engine updates the count field to be the count of the comments.

[0012] In an example each comment has a comment type that is selected from a predetermined list of comment types and the count engine updates the count data to indicate the number of the comments of at least one of the comment types.

[0013] In an example the count engine updates the count data to indicate the number of the comments of each comment type selected.

[0014] In an example the count engine updates the count data to indicate the number of the comments of each comment type.

[0015] In an example the system includes a comment engine that is responsive to the interface receiving a posted comment from one of the first users in respect of the posted content for:

accessing the database and being responsive to the comment data and/or the content data to ascertain if the one of the first users has an existing comment for the posted content;

if so, comparing the posted comment and the existing comment; and

if the posted comment and the existing comment vary, updating the comment data and the count data.

[0016] According to a second aspect of the present disclosure there is provided a method for allowing first users to electronically post respective comments relating to electronically posted

content of a second user, the method including the steps of:

providing an interface for receiving the content from the second user and the comments from the respective first users and for allowing the users to access posted data;

storing in a database: content data that is derived from the content, wherein the content data includes a content field that is indicative of the content and a count field for storing count data; and comment data that is derived from the comments;

being responsive with a count engine to the interface receiving comments from the respective first users for selectively: determining a count of the comments made by the first users; and updating the count field to be indicative of the count; and

using a publishing engine that is responsive to the content data and the comment data for generating the posted data.

[0017] In an example the method includes the step of the count engine updating the count field to be the count of the comments.

[0018] In an example each comment has a comment type that is selected from a predetermined list of comment types and the method includes the step of the count engine updating the count data to indicate the number of the comments of at least one of the comment types.

[0019] In an example the method includes the step of the count engine updating the count data to indicate the number of the comments of each comment type selected.

[0020] In an example the method includes the step of the count engine updating the count data to indicate the number of the comments of each comment type.

[0021] In an example the method includes the step of providing a comment engine that is responsive to the interface receiving a posted comment from one of the first users in respect of the content for:

accessing the database to ascertain if the one of the first users has a previously posted comment on the content; and

if so, ascertaining if the posted comment and the previously posted comment vary; and

if so, updating the comment data and the count data.

[0022] According to a third aspect of the present disclosure there is provided a data structure for allowing first users to provide respective comments relating to content provided by a second user, the data structure including:

a content field that is indicative of the content provided by the second user; and

a count field associated with the content field for storing count data indicative of a count of the comments made by the first users.

[0023] In an example the count data is derived from the number of the comments.

[0024] In an example each comment has a comment type that is selected from a predetermined list of comment types and the count data is derived from the number of the comments of at least one of the comment types.

[0025] In an example the count data is derived from the number of comments of all the comment types.

[0026] In an example the comment type for a comment is selected by the respective first user.

[0027] In an example the count data is indicative of up to a maximum of one comment each for the respective first users.

[0028] In an example the count field is updated in response to one of the first users providing a respective comment.

[0029] According to a fourth aspect of the present disclosure there is provided a system for allowing users to electronically post respective comments with user devices, wherein each comment

relates to one of a plurality of items of posted content and the system includes:

an interface for:

receiving from the user devices: the comments; and requests for selected posted data; and

allowing the selected posted data to be directed to the user devices in response to the respective requests from those devices;

a database for storing: content data for each item of posted content that is indicative of the posted content for the respective items; and, for each of the comments, comment data that is indicative of the comment and the user making the comment;

a comment engine that is responsive to the interface receiving comments from the respective users for selectively updating the comment data and the content data; and

a publishing engine that is responsive to the requests for selected posted data for accessing the content data to generate the selected posted data.

[0030] In an example the content data includes count data and the comment engine is responsive to the interface receiving a comment from one of the users in respect of one of the items for: determining a count of the comments made by the users for that item; and updating the count data to be indicative of the count.

[0031] In an example:

each comment has a comment type that is selected from a predetermined list of comment types; and

the comment engine updates the count data to be indicative of a count of the comments of at least one of the comment types.

[0032] In an example the comment engine updates the count data to be indicative of a count of the comments of each comment type selected by the users in respect of the one of

the items.

[0033] In an example the count engine updates the count data to indicate a count of the comments of each comment type for the one of the items.

[0034] In an example the comment engine is responsive to the interface receiving a new comment from one of the users in respect of one of the items of posted content for:

accessing the database to ascertain if the one of the users has provided an earlier comment in respect of the one of the items;

if so, comparing the new comment and the earlier comment; and

being responsive to the comparison for selectively updating the user data.

[0035] In an example the comment engine is responsive to the comparison for selectively updating the count data.

[0036] According to a fifth aspect of the present disclosure there is provided a method for allowing users to electronically post respective comments with user devices, wherein each comment relates to one of a plurality of items of posted content and the method includes the steps of:

providing an interface for:

receiving from the user devices: the comments; and requests for selected posted data; and

allowing the selected posted data to be directed to the user devices in response to the respective requests from those devices;

storing in a database: content data for each item of posted content that is indicative of the posted content for the respective items; and, for each of the comments, user data that is indicative of the comment and the user providing the comment;

being responsive to the interface receiving comments from the respective users for selectively updating the user data; and

being responsive to the requests for accessing the content data and the user data to generate the selected posted data.

[0037] According to sixth aspect of the present disclosure there is provided a data structure for allowing users to electronically post respective comments with user devices, wherein each comment relates to one of a plurality of items of posted content and the data structure includes:

content data for each item of posted content that is indicative of the posted content for the respective items; and

for each of the comments, user data that is indicative of the comment and the user making the comment.

[0038] In an example the content data for each item includes count data that is indicative of a count of the comments made by the users for that item.

[0039] Reference throughout this specification to “one embodiment”, “some embodiments” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases “in one embodiment”, “in some embodiments” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment, but may. Furthermore, the particular features, structures or characteristics may be combined in any suitable manner, as would be apparent to one of ordinary skill in the art from this disclosure, in one or more embodiments.

[0040] As used herein, unless otherwise specified the use of the ordinal adjectives "first", "second", "third", etc., to describe a common object, merely indicate that different instances of like objects are being referred to, and are not intended to imply that the objects so described must be in a given sequence, either temporally, spatially, in ranking, importance, or in any other manner.

[0041] Unless the context clearly requires otherwise, in the claims below and the description herein, any one of the terms “comprising”, “comprised of” or “which comprises” is an open term that means “including at least the elements/features that follow, but not excluding others”. Thus, the term “comprising”, when used in the claims, should not be interpreted as being limitative to the means or elements or steps listed thereafter. For example, the scope of the