

CLAIMS:

1. A computer-implemented system for receiving and propagating efficient search updates, the system comprising:
 - a memory storing instructions; and
 - at least one processor configured to execute the instructions to:
 - receive, from an external system via a network, a plurality of entity change requests;
 - determine, based on the received plurality of entity change requests, a resulting entity change request to modify data in an entity associated with the external system;
 - save the resulting entity change request to an entity store;
 - push the resulting entity change request from the entity store to an event publisher;
 - generate a plurality of snapshots of the resulting entity change request by the event publisher;
 - classify the resulting entity change request based at least on one of the plurality of snapshots;
 - forward the classified entity change request to a search index database; and
 - update the search index based on the classified entity change request.
2. The system of claim 1, wherein:
 - each entity comprises a plurality of sub-entities;
 - each entity change request comprises a request to modify a sub-entity of a respective entity.
3. The system of claim 1, wherein the resulting entity change request comprises a change to a service, a change to an item, or a change to data associated with the external system.

4. The system of claim 1, wherein the instructions further cause the processor to receive, from the first external system, a request to begin a transaction.
5. The system of claim 1, wherein the instructions further cause the processor to clear the entity store of all entity change requests, responsive to pushing the resulting entity change request from the entity store.
6. The system of claim 1, wherein the instructions further cause the processor to push the resulting entity change request from the entity store to a second event publisher for storage in a cache database.
7. The system of claim 6, wherein pushing the resulting entity change request from the entity store to the event publisher and the second event publisher comprises formatting the resulting entity change request as a snapshot.
8. The system of claim 7, wherein the instructions further cause the processor to:
 - rollback a modification to an entity associated with the external system;
 - search the cache database to determine a plurality of snapshots needed to reverse.
9. The system of claim 1, wherein forwarding the classified entity change request to a search index comprises forwarding the classified entity change to the search index via a real-time stream selected based on the classification of the entity change.
10. A computer implemented method for receiving and propagating efficient search updates, the method comprising:
 - receiving, from an external system via a network, a plurality of entity change requests;

determine, based on the received plurality of entity change requests, a resulting entity change request to modify data in an entity associated with the external system;
saving the resulting entity change request to an entity store;
pushing the resulting entity change request from the entity store to an event publisher;
generate a plurality of snapshots of the resulting entity change request by the event publisher;
classifying the resulting entity change request based at least on one of the plurality of snapshots;
forwarding the classified entity change request to a search index database; and
updating the search index based on the classified entity change request.

11. The method of claim 10, wherein:

each entity comprises a plurality of sub-entities;
each entity change request comprises a request to modify a sub-entity of a respective entity.

12. The method of claim 10, wherein the resulting entity change request comprises a change to a service, a change to an item, or a change to data associated with the external system.

13. The method of claim 10, further comprising receive, from the first external system, a request to begin a transaction.

14. The method of claim 10, further comprising:

clearing the entity store of all entity change requests, responsive to pushing the resulting entity change request from the entity store.

15. The method of claim 10, further comprising:

pushing the resulting entity change request from the entity store to a second event publisher for storage in a cache database.

16. The method of claim 15, wherein pushing the resulting entity change request from the entity store to the event publisher and the second event publisher comprises formatting the resulting entity change request as a snapshot.
17. The method of claim 16, further comprising:
 - rollback a modification to an entity associated with the external system;
 - search the cache database to determine a plurality of snapshots needed to reverse.
18. The method of claim 10, wherein forwarding the classified entity change request to a search index comprises forwarding the classified entity change to the search index via a real-time stream selected based on the classification of the entity change.
19. A computer-implemented system for receiving and propagating efficient search updates, the system comprising:
 - a memory storing instructions; and
 - at least one processor configured to execute the instructions to:
 - receive, from an external system via a network, a plurality of entity change requests;
 - determine, based on the received plurality of entity change requests, a resulting entity change request to modify data in an entity associated with the external system;
 - save the resulting entity change request to an event store;
 - push the resulting entity change request from the event store to an event publisher;
 - push the resulting entity change request from the event store to a second event publisher for storage in a cache database, wherein pushing

the resulting entity change request from the event store to the event publisher and the second event publisher comprises formatting the resulting entity change request as a snapshot;

clear the event store of all entity change requests, responsive to pushing the resulting entity change request from the event store;

generate a plurality of snapshots of the resulting entity change request by the event publisher;

classify the resulting entity change request based at least on one of the plurality of snapshots;

forward the classified entity change request to a search index database;

and

update the search index based on the classified entity change request.