A LOCATION BASED DIVERSIFIED MOBILE NEWS FEED SYSTEM (ANDROID)

Siddharth Mishra, Toom Arjun Reddy, Pradeep Sadanand

Abstract: **A location based mobile news feed system (The proposed name of the system is active.be) generates customized user generated news feed for Android Mobile users on their spatial (current location or future locations) and non-spatial preference (interests). The currently existing system sends geo-tagged messages to its users by simply matching the similar content. One of the major drawbacks of this existing approach is that, the news feed may contain messages related to the same location or the same category of interest choices. It is very important to make the news feed diversified, so that the user will not receive the messages from same category of choices. A diversified mobile feed is proposed to solve this issue. Diversified mobile news feed system helps users explore news interests and activities. This location based news feed system asks a user to mention the minimum number of choices for categories to diversify the news feed which is called h-diversified function. The main aim is to efficiently generate a news feed for users for their current and future locations, so that (i) the news feed which has updates generated according to users preferences (ii) a relevance measurer which maximizes the relevance of each update to the user. To achieve this objective we divided the problem into two parts. A decision problem, which makes a decision and proves the correctness of the problem. The optimization problem is solved by a three stage heuristic algorithm, which effectively improves the relevance, efficiency and efficiency of news feed.**

Recent customer/mobile user data survey suggests that people are interested in exploring new places, events, services and activities nearby. And there is no such system in existence which uses user generated messages from one area to help people from that area. In many countries healthcare is a major concern. People do not have access to good quality health care services though there are a number of organizations and hospitals providing effective services. For most people affordability also comes into picture. Therefore a system which helps gather complete details from another user and choose a service which he can afford is needed. People should be notified with all the important activities around their geographic location such as awareness activities/events, government surveys, etc.

I. Introduction: Today, Wireless Communication has a various uses and is a very important feature of all the Global Positioning System enabled smart-phones. There are a diverse set of social networking applications which provide a number of services to the users which use a number of location predicting algorithms, so that a customized service can be offered to the user based upon his location. Most of the social networking applications have news feed which provides user with all the information in and around a place. A location based diversified mobile feed allows users to post geo-tagged messages and which the other users around that particular location receive these messages as a part of the daily feed. For instance, Ram can receive up to 10 updates which are most relevant to the categories he chose within 5kms of his current location every 20 seconds". Therefore, a diversified mobile feed generator solves a number of user issues such as to find out a nearby service/activity/event which is most relevant to him and constantly change these updates as the user changes his location.

Current System:
The current system also produces news feed for the users, but the relevance of the feed is measured by the content similarity of the message m and a sender's shared updates and the distance between the sender and the receiver. Therefore two factors, a spatial factor(distance between the two users) and non spatial factor(content similarity of the query and user-generated message). The user will only receive the messages from the topics he is interested in at the same time if there is similar content between the posting stored and shared updates of various users, hence there is no optimized tracking of the messages which are relevant to the user.
Secondly, the news feed is generated only for the user's current location. But you cannot expect a user to constantly operate out of that particular geo-location for a long time. The existing system collates all the messages based on the user's location at query time. For example there are n number of messages which are from a particular geo-location and which are relevant to Ram's query. The geographic location feed returns the messages which are relevant to the user's location but not preferences. Therefore to improve the relevance of the feed generated, the path prediction algorithm predicts two future locations and therefore combines both the functions to generate a feed which is not only relevant to the location but also relevant to the user's preferences.
Disadvantages:
1. Relevance alone is not able to generate a feed which can completely satisfy user's preferences.
2. The quality of the system is less as it searches for posts which have similarity in content which is not efficient.

Advancements:
The proposed system is a diversified mobile feed, which takes both relevance and the diversity of the news feed as priorities before presenting it to the user. A h-diversified constraint is used , this constraint has a condition that the messages being displayed on a news feed should belong to h-distinct user chosen categories. The h-diversified constraint diversifies the content

while improving the relevance of the messages being displayed. For example, according to the existing system Ram receives messages which are most relevant to him according to the location he is in and searching for similarity in content. But the proposed system looks ahead to generate a feed which is diversified and contains content from a number of categories. For example, the existing system generates all the messages from a particular topic searched for, for instance, hospitals and gives user-generated messages and reviews about all the hospitals around that geo-location. But the proposed system changes its displaying results according to the location while keeping the news feed diversified by including various categories such as hospitals, movies, events, etc. and including messages from all the categories.

Advantages:
1. Maximize the relevance of the location based feed while the feed satisfied the h-diversified constraint to diversify the contents of the feed.
2. To improve the quality of the news feed by not just searching for the similar content but including all the user generated updates from a diversified set of categories.
The application majorly uses 4 main algorithms to generate relevant outputs and create a news feed for the user.
1. Path Predicting - To determine the exact geo-location of the user so as to gather all the news updates from all the users nearby and present it to the receiver.
2. Categorized Relevance Measuring- To provide the user with a number of categories to choose as his preferences and generate message which are relevant to that particular category
3. News Feed generating - Create a news feed with all the updates of various users around that geo-location.
4. Diversification checking - To generate messages equally from a number of chosen categories and making it diversified when being presented to the user.
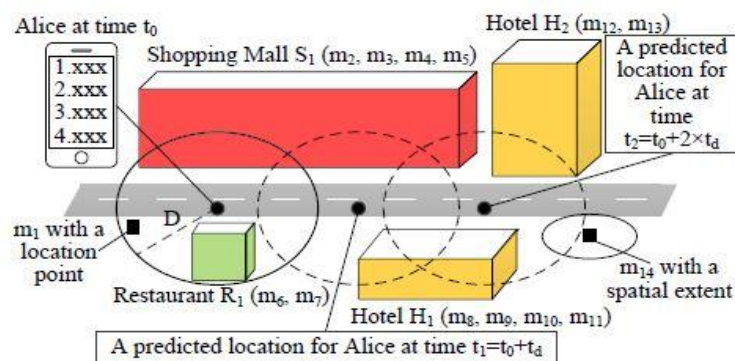
Applications:
- Identify local events, activities and news around your location.
- Get quick user generated messages on your news feed with updates nearby(eg. Any strikes/protests etc)
- Find nearby healthcare, emergency systems which will improve life expectancy.
- In rural areas, people will be able to identify local news and activities which connects them to basic resources.(Internet.org is connecting 2 billion people to the internet)
- Commerce: Find nearby restaurants, services, needs and activities all on one tap, on your news fee.
- Identify what's popular around your geographic location and stay updated

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