Feeling Flows Evolve with Fascinating Scenes of the Spatio-Temporal Memories

Mikio Sasaki
Music Scene Research
Kariya, Japan
caffe_berry@nifty.com

Abstract— **Very impressive scene will activate the dynamic relation between the feeling flow and the stochastic event occurrence. It will lead to the scene evolution in the Web world. FFLOW (Feeling Flow) and the Environment Values are the source of the moving demands. Then a lot of attributes are filtered to determine the landmark and the target object to get within the estimated schedule on the user side. Virtually expected comfort or some active passion will enable the enhancement**.

Keywords—feeling flow, environment value, comfort potential, floating confidence, spatio-temporal memories.

I. INTRODUCTION

Feeling Flow enhance the acquisition over the various fields, although the degree of enhancement depends on the personal features (eating, drinking, breathing, taking exercise, etc.). As the result of the past ten years of PFLOW (People Flow) related investigation, I have reached the consensus that the most important idea is the FFLOW (Feeling Flow) [3] for the practically usage of my concerned applications (web based dynamic mediator, etc.). Therefore, I would like to close at this stage the PFLOW dependent research works in order to conclude.

Very impressive scene will activate the dynamic relation between the feeling flow and the stochastic event occurrence. It will lead to the scene evolution in the Web world.

FFLOW (Feeling Flow) and the EV (Environment Values) are the source of the moving demands. Then a lot of attributes are filtered to determine the landmark and the target object to get within the estimated schedule on the user side. Virtually expected comfort or some active passion will enable the enhancement.

Although the degree of enhancement depends on the personal features, most of them are restricted on the basis of trust model, where, trusters are based on the past user himself. Also trustees are formed in the past user himself on the basis of the achievement history. Some of them are assisted by the past memory. Others of them are denied by the negative response from the real other person.

In turn, I will focus on FFLOW which I have originally proposed based on the idea of the EV. And some spatio-temporal arrangements of the past memories will make the FFLOW very smooth in the real world. This can be done by the comfort retrieval of the past spatio-temporal arrangements of any attributes or any items. When partially the FFLOW has been realized as the PFLOW, it will little bit change the FFLOW itself by the information feedback and the sensing results.

Moreover, user would change the scene without losing the comfort degree which has been expected in advance. I introduced the experimental mediator system for moving demand prediction considering the user's visual feeling from the HMI panel, based on the specialized feature confidence vector set MOVER [2], [3], [4].

A scene which is selected on the panel instantly by the user opens the past visual experiences and the feeling-related various multi-modal spatio-temporal domains at the first stage very quickly [2].

There exist at least three roles in the scene: 1) The entrance to the past user experiences (not only visual), 2) The entrance of the series of the landmarks and sceneries, 3) The unknown or un-experienced or not matured spatio-temporal regions. 4) The entrance to the zoomed view of the next scene

Role-1 to 3 are mainly for the retrieval and these four will evolve to the next stage of the speculation and creation for the user. However, as the MOVER based data dynamically changes and will not be stored as the big data to enable the machine learning, the system needs sufficient models to start the Initial Evolution Phase (cold start) particularly when the data trend is not be clarified. It may not necessarily include the trustee [5] but virtually, related agents will be expected to start the moving inside the user experiences. When getting into the Estimation Phase, the extension behavior from the visual touch to the more multimodal desire (search, retrieve, looking around for something going deeper to the dedicated area, being absorbed, dreaming, making expectation) will start. These will have time series expansion but also have the time span constraints. Weakly supervised learning (WSL) will make the real time retrieval possible and evolution process faster [1].

II. RELATED WORK

Sasaki has shown the effects of the combination of the collected intelligence and the GLAD [1] which is one of the WSL methods. He showed some improvements especially in MPEG based scene understanding [1]. In this work, he also showed the connected recognizers will make the performance evolution and the recognition accuracy would be improved. He also tried the concept of moving demand prediction in the area of sightseeing applications. He has uniquely proposed the concept of MOVER [3], [4] which can practically express the 100 dimensions of confidence vectors each of which is tied to the natural language expressions and easily applied for the expressions of landmarks and users. Numerically, the confidence vectors are based on the idea EV [3]. This is originally created from the PFLOW related problems. He extended the idea to FFLOW and finally reached the conclusion that the PFLOW is the physically embodied phenomenon of the FFLOW. Also, I reached the conclusion that the many research results of PFLOW is essentially the analysis of the outcome which is not the activation source. In the iteration of PFLOW and FFLOW loops, it is true that the PFLOW could be the source of the physical movements.

The integrated scheme of moving demand by using the form of environment values for multiple categories of landmarks has been proposed [1], [2]. It has become possible to seek the optimum solutions for the users to select the most convenient trajectory based on connected and autonomous technologies for vehicles. Then the prediction of the various EV and the recommendation of them based on the specialized definition of feature vectors MOVER. By using MOVER, we can define user profiles and landmark profiles. Also, we can seek the user model and landmark models as the weighting coefficient matrices on MOVER.
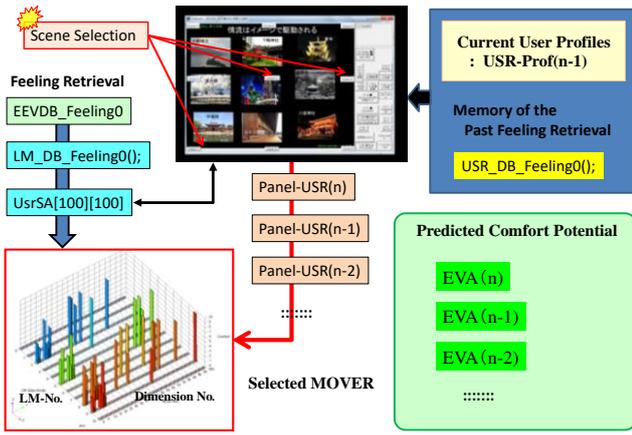
Figure 1 Real time acquisition of user's demand.

Figure 2 Comfort based trajectory creation.

According to the concept that can simplify the EV and extend it for the expression of comfort, we can make the clear architecture for moving demand predictions. It is possible within a definite time span, in the sense that we can easily compute the completely other area of recommendations under the condition that the same level of comfort. We call the method feeling based retrieval. From the applicational view, moving demand prediction and buying items are representative recommendation activities of mediators.

This idea is very much consistent with the relation between a user and an item which is fascinating based on the social trust. Moreover, it is numerically estimated according to the truster and trustee model stochastically described [5]. It enables to compute the estimation of any items even if there exists no big data or cold start problems.

When scenes activate FFLOW, if predicted physical realization exceed the limit of the real world, the fascinating scenes only survive to evolve based on the comfort restriction. This time, although it is restricted to the moving demand, other decisions for moving requirements and the behavior occurrence will pass the stages like above. The common points are that the embodiment process of decision by using FFLOW by way of virtual world.

Usually, most of the roads and parking lots around the famous popular landmark (LM) will have the traffic congestions. After switching to walk, you will not need to wait so long. On the other hand, the route to get back home by cars will also have heavy jam. This point is common in shopping mall access. Namely, the same kind of FFLOWs activate various demands.
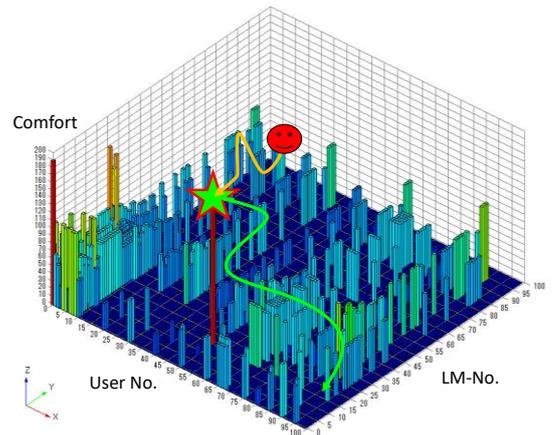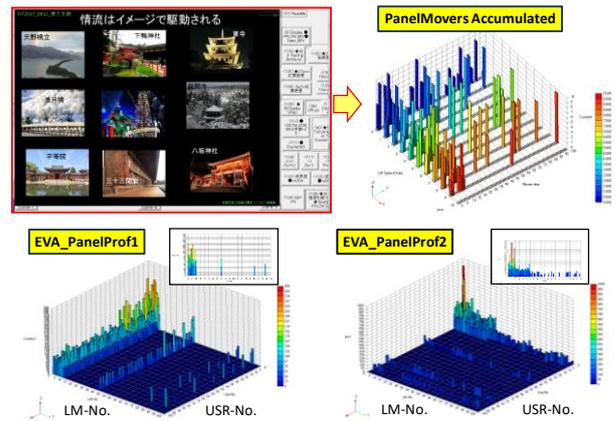

Figure 3 Acquisition of panel movers.

III. ENTRANCE OF FEELING FLOWS EVOLUTION

FFLOWs evolve with the fascinating scenes of the spatio-temporal memories through the following five entrances. Spatio-temporal movement in the virtual domain cause the FFLOW activation to recommend the menu for the quick decision.
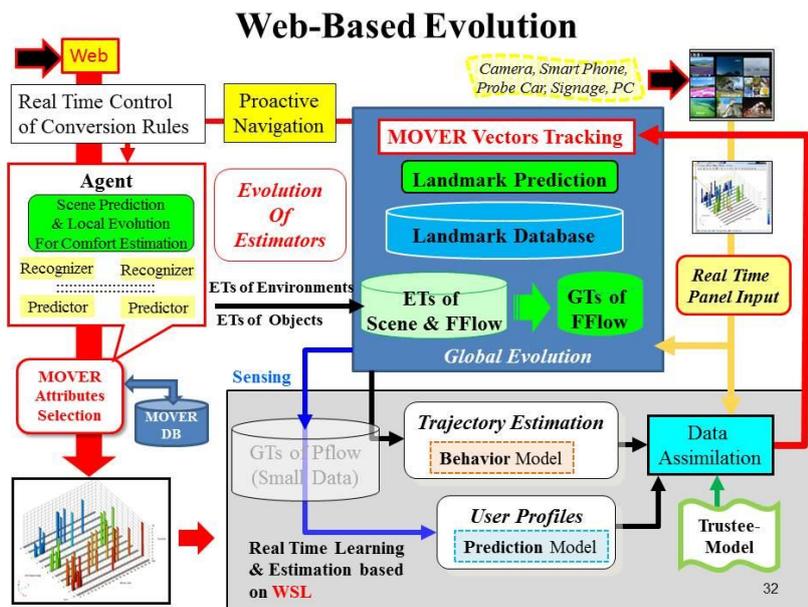

Figure 4 Evolution process.

A. Entrance to the Past Experiences

This point is essentially the same as the conventional photo library. By using the panel like browse, the actor can arbitrarily set the mental environment without restrictions. Also, the actor can remember and retrieve the forgotten memories of various LMs and peoples and affairs, including events, foods, memorial places, city structures, histories, fashions, languages and many other related cultures. Those will lead to the more sophisticated information and to activate the unexperienced areas around this window. At the same time, the essential feeling will activate the next desire to visit here and make it clear what the actor wants to experience newly. Sometimes it will evolve to the creation of the virtually unexperienced scenes and stories and music and other arts.

B. Entrance of the Series of the Landmarks and Scenes

This trigger will access the spatio-temporal memories as the time series of the events and very cinematic sceneries. However, some connected relations to the cloud database will be needed to form the geometrical interpretations and continuous semantic understanding based on connected intelligence. In order to verify the effects, the author is planning to introduce WSL and the Trust PMF model [5] into the MOVER based mediator [3], [4] for the various setting of the MOVER definitions corresponding to the multimodal transformations [6].

C. Entrance to the Future Experiences based on the Past

This will enable multimodal transformation of the past spatio-temporal memories which can be completely virtual but sometimes it will lead to the fairy correct future predictions when the time information includes some anticipated structures. Also, the feeling retrieval [4] of the past would yield some good strategies to the instantaneous and autonomous decision for the spatio-temporal movements for the machine.

D. Entrance to the Un-Experienced Regions

This will create the completely virtual movements in the actor's mind, namely FFLOW. Also, this is the "dream" of the machine. When both of the two dreams are closely related each other, the machine can estimate the actor's dream to realize the first approximation of the FFLOW which can be visualized as the direct feeling. Next, it can modify the estimation to FFLOW navigation based on the other criterion such as comfort, safety, etc.

E. Entrance to the Un-Experienced Category

This will enable the more flexible architecture of the scene and the city structures. Also, there may exist new kind of peoples and cultures. It may not necessarily be a human and the CG based animation world would be possible. Moreover, it is possible to free the physical constraints, logical restrictions, time continuity, etc. However, some kind of mental rules might be kept for the minimum moral constraints.

IV. FLOATING CONFIDENCE

On the edge of the real time discriminations of the stochastic situations on MOVER space, we can assume "the actor" who is just about to focus on the omen of the occurrence of the targeted event. This kind of "special scene" emerges as the spatio-temporal changes of {FFLOW, sense, safety, information, danger, value of things, money, perception of time, MOVER selection and adaptation, feeling retrieval within the same MOVER, feeling retrieval over the different MOVERs, etc.}[4].

Numerically, these factors will cause the targeted confidence vectors being induced easily by some specific human (including "the actor" himself) operations (weighting, concentration, looking, filtering, rating, etc.) to output different results, while watching surrounding various "other possible spatio-temporal regions" as well. Namely, "the actor" can feel the spatio-temporal geometry surrounding the target holes as the "grooves" as the result of the concentration.

Semantically, the same effects are caused by the language level of matching. I call this fluctuating property the Floating Confidence (FC), which has three levels and three aspects.

Floating-1 is the hierarchical reversal in a user's consciousness and sensing caused by the focusing and spatio-temporal movements either in real or virtual world. Floating-1 is the continuous but randomly moving natures between different layers. Floating-2 is the fluctuation of the stochastic distributions on every event for a user. The distributions of the spatio-temporal regions are relatively easily moved by some force although have some coherency. Floating-3 is the language mapping between different continuous phenomena.

If the actor targets the single purpose, it would be very rare to attain the stationary performance for the prediction. If some active means
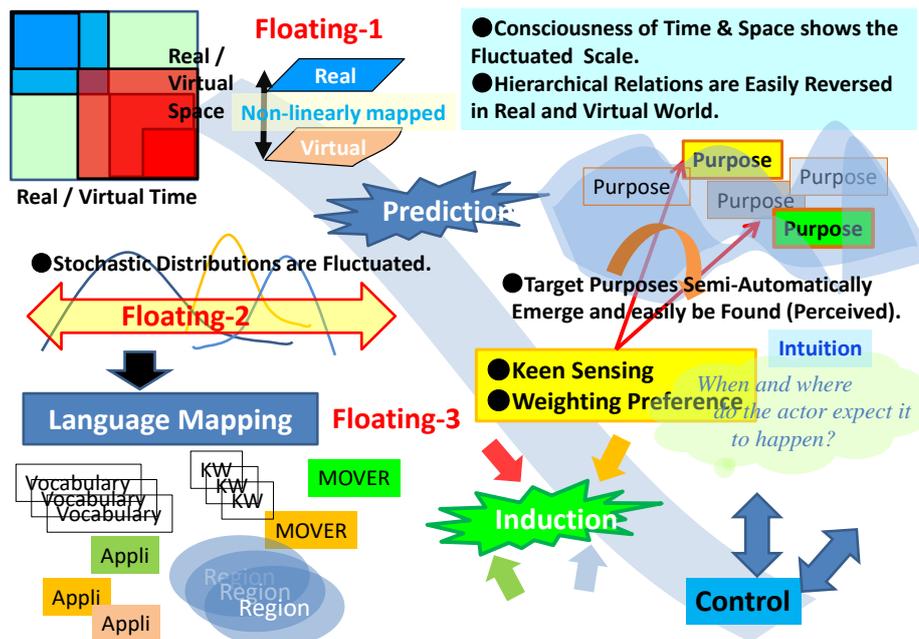

Figure 5 Floating confidence.

for the statistics exists, the actor's purpose can be dynamically organized from the realistic view of applications. FC will clear the most important restrictions "in time fulfillment" and achieve "more than the minimum accuracy expected".

The hierarchical relations between the actor's different status nodes are practically a graph architecture. This will enable the same actor to define the major statues and sub-statuses while permitting the different MOVERs can be easily mixed dynamically. Usually, the major status is defined around the current actor's spatio-temporal region. When the actor is absorbed in special region, it becomes the major status and the others get down to the lower dimensions.

Floating-3 makes the mapping between the MOVER spaces and the language descriptions are not definite. This means the MOVER itself does not have the solicit dictionaries but has some "geometrical interpretations" which might express the generic properties of human sense, partly they are defined by some adjectives (smart, easy, soft, great, beautiful, clean, pretty, comfortable, holly, sophisticated, historical, melodious, pop, etc.). Therefore, the solutions of MOVER related problems become inevitably vague. But it can be fairy solved at the high accuracies within the restriction of the existing time by using keen sensing of the users and user experiences, not by "supernatural powers" but by sophisticated observations and trainings. We can see many pragmatic examples around music, sports, art, designs, literatures, and other human related sensing and emotions.

V. EXPERIMENTS

All the behaviors regarding FC can be realized using the above five entrances of feeling evolution as the immediately and arbitrarily mixed at any time. Therefore, the target FC will go into effect in the specified time span. However, the specified experiments for the verifications are not definite. Practically, the actor's selection of the application and the decision of situation parameters should be designed.

This time, I am supposing the relatively simple experiments as follows:

a) One day schedule decision (shopping, jogging, watching movies, reading books, lunch time considering movement)

b) Prime decision of summer hollidays playing menues

c) Main playing menu of the musical instruments and the way of singing in ad-lib manner

d) Comparison of originally composed music between my own creation and the one created by dedicated software

e) Realtime composition of photo slides which are comfortable for the favorite music

f) Immediate control of the skiing at the very steep down hill (speed, decision, way selection, manner, etc.)

VI. EVALUATION

Unfortunately, the experiments shown above are evaluated mainly by the actor's own feeling and subjective estimations of the focused spatio-temporal memories and scenes. And what is worse, most of the acquired experiences would not be stored unless the latest cloud based ubiquitously connected cameras and sensing devices which are recently introduced as the customer and PFLOW analysis in some specified shopping malls. They can be numerically expressed using the various attributes of points. The total verification depends on the usage of the results which has roughly the 50 % of the academic factors and the 50% of the practical application points of views. The author will describe the detailed ways for each example from now on. Personally, my subjective score for the total feeling which should be more clarified (but such additional consideration will also decrease the score itself) is roughly seventy for smoothness and comfort. The maximum and minimum score are tentatively defined as 100 and 0, respectively. Under this definition, my subjective score for each experiment above is a)70, b)70, c)65, d)75, e)40, f)60.

VII. CONCLUSION

The dynamic relation between the FFLOW and the stochastic event occurrence has been utilized to extend the moving demand prediction mechanism in three ways. First one is the real time acquisition of the user's demand by scene-based presentation and descriptions. Second one is the dynamic evolution architecture of the database which can follow the brand-new trend before the big data accumulated. Third one is the FC which will raise the accuracy of the vague solutions for the related predictions.

Web based evolution of the MOVER will converge temporarily to the finest solutions, that is to be shown by the latest experiments.

REFERENCES

[1] M. Sasaki, "The Estimated Truth will Evolve on Neuro-ITS", *ITS World Congress 2014*, Detroit, Sep. 2014.

[2] M. Sasaki, "On Generic Properties of Extended Environment Values", *ITS World Congress 2017*, Montreal, Oct. 2017.

[3] M. Sasaki, "When Feeling Flow Activates People Flow", *FIT 2017*.

[4] M. Sasaki, "An Investigation On the Dynamic Relation between the Feeling Flow and the Stochastic Event Occurrence", *FIT 2018*.

[5] Bo Yang, Yu Lei, Jiming Liu, "Social Collaborative Filtering by Trust", *IEEE PAMI*, Aug. 2017.

[6] Han-Jia Ye, De-Chuan Zhan , Yuan Jiang, and Zhi-Hua Zhou, "What Makes Objects Similar: A Unified Multi-Metric Learning Approach", *IEEE PAMI*, May 2019.