

Mobility management of improvement of mobile processes and telecommunications

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Abstract: Today the appearance of mobility has changed the nature of the systems distributed on a large scale; many additional services had to be developed for the mobile networks in order to offer a total mobility to the users. The “mobility” phenomenon introduced new requirements in security in comparison with the traditional fixed networks indeed the lack of physical protection of the access points and the transmission on the way are the main causes of the vulnerability of the mobile networks, but also the effective lack of tool for management of the mobile processes and the improvement contained as of its processes impact in a direct way the future of mobile development and the customer experiment in opposite to the quality, durability and also the portability of the mobile processes.

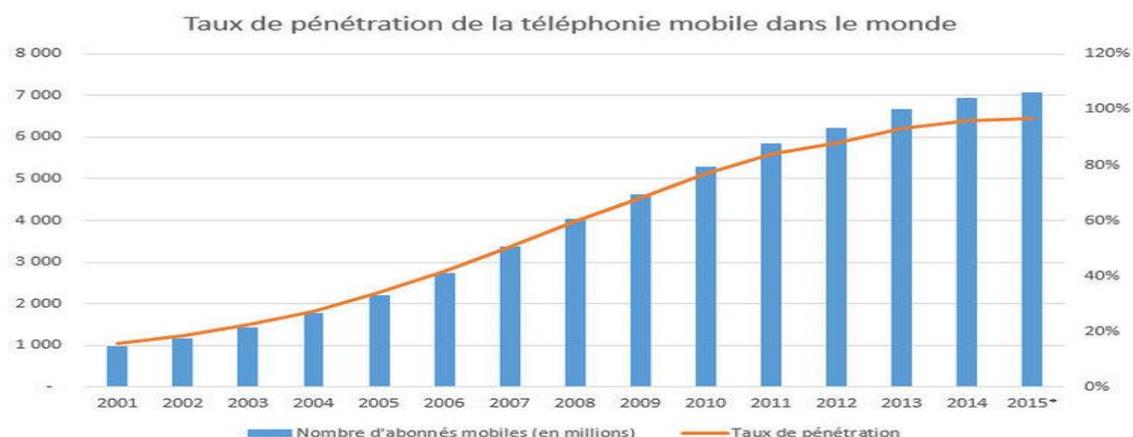
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I. INTRODUCTION

Nowadays, computing is not related any more to a station of fixed calculation: our telephones have become small computers, and even other objects around us are computerize, moreover the computer systems gain in complexity a very large number of entities take part in the interaction, several users are in smart buildings we need to reach a remote services, we review here some of the fields which are connected to our research, the questions of localization and access to the services or the questions of security and of quality of service.

II. MOBILE PROCESSUS SYSTEM

The mobile systems of process allow the applications made up of a number of process alternative of communicating between them through a reconfigurable network dynamically in the course of time, these systems to represent most current applications distributed in the models making it possible to describe such systems.



Mobility is generally modeled by the possibility of creating dynamically and to transmit names of channels, which makes it possible to create and remove links of communication in the course of execution, more over these models have mechanisms to establish creations and dynamic suppressions of process.

Satisfaction as well as the effectiveness of the processes, offer competitive advantages, the mobile applications thus make it possible to digitize the processes trade as of the beginning, the applications and mobile services contribute to the collaboration within divided teams. Management can use the Mobile Business intelligence, learnedly put in work the mobilization of the processes trade to have to create entirely new models of application complexed.

The organizations which wish to benefit from opportunities that offer mobility will have to obtain a strategy of modern mobility in my opinion of more integral to the inter-connected and interactive sophisticated processes trade, to satisfy the request, it is advisable to place at their disposal a reliable infrastructure, it is advisable to plan to acquire and manage the devices the mobile channels of communication as well as the applications and the services throughout their life cycle.

III. SECURITY OF THE MOBILE PROCESSES AND THE SERVICESIN LOCALIZATION

A: Specificity of the mobile processes:

The solution adopted by the system is of type of access lists especially to the administration level each resource is affected by a list of identities having rights of reading, writing or execution. When program is carried out, it takes rights of user or owner (it is the owner which decides it), the concept of owner approaches the one of the author, but remains different, the users and the owners are users of the same machine, and are known and controllable.

In a system of mobile code, the owner of the code, who we can call the diffuser, and the user can be found on machines who do not have any common point, in particular with regard to the administration the rights of the user and of the diffuser are exerted in different fields and is thus not comparable, since the code is carried out on the machine of the user, it is with the rights of the user that it is carried out, in the event of dysfunction of the code, or of malevolent code, it is very difficult for the user to ask accounts the diffuser, whereas it is simple to ask explanations to an owner, the security system adopted for the mobile codes thus consists in installing a layer of security between the code and the resources so as to be able to carry out the code with a subset of the rights of the user, then to ask this latter to fix the limits of this subset, according to parameters such as the source of the code(addresses diffuser), or that an electronic signature authenticating the author of the code, with the mobile processes, the problem is still different, as much the mobile code is limited to the role of tools or of interfaces which one can distribute, as much the mobile processes offer new prospects like that of agents moving through the network and preserving links towards their site of origin. The border between these two types of process is not clear and independently of the questions of security, it is not possible to however say in the general case for which works a process, would be only in the event of dysfunction, it is necessary to know towards which the administration of a system can be turned over, moreover the mobile process presents an important originality, it can change, i.e. worked with the service of a process, which yields it to another and soon.

B: Security of the Mobile Processes:

The security of the computer systems is a concept which goes back to the appearance of the multi-user systems, on which a set of users must share common resources but have resources which are booked to them and whose they controls the accesses..

Typically, the security leads to consider computing as a set of resources to which a set of users reach, the security consists in defining links between the users and the resources, links corresponding to rights of access. The concept of anybody is rather vague in data processing, since the human being communicates through peripherals. The user is thus represents in data processing by the processes which it controls and which represent it.

C: Improvement of the Mobile Processes:

The increase unceasingly increasing in complexity of the applications and amongst interactions between water makes that a defect in another component can influence the operation of your own software or system. For you to secure some, it is necessary to make exhaustive tests, which is not easily justifiable economically, even impossible in terms of times and load.

In a context of international competition, of search of profitability and competitiveness, it is essential to improve the effectiveness of the mobile development processes, the effectiveness of the developments of the multiplatform applications to fact the object of many actions, new languages, new paradigms and new methodologies.

The effectiveness of the mobile processes is dependent on the context where they are used, the improvement of the processes of test to reduce the costs and the duration or to increase their effectiveness of it, is an objective displayed by all

Is the improvement of the processes based on an external reference frame based on established processes and to apply these methods all done , can the implementation however not correspond to waitings another thus which improvements to consider after the external reference frame was completely implemented?

The use of a methodology based on the analysis of the internal reference frame of the company is automatically adapted to the needs for this latter, after an evaluation (an audit) of the processes of existing test and development, of their respective profitability (in terms of cost, of generation of defects and effectiveness of detection).

The evaluation of the processes and their relevance, the identification of the to be improved, selection of those to the processes improvement in priority, and the recommendation of actions, requires appointed competence and an extended experiment on behalf of the actor, such levels of knowledge require consultants, to improve them, it is important to measure the activities of tests, and also all the other linked activities since the requirements.

D: Current mobility of localization:

Users and their mobile devices are mobile, and can be found anywhere, the location became, nowadays, one of the most important elements, we study the pendants geo services their developments over time, this type of service has to provide results based on the location where the user is, and has developed especially after the integration of the GNSS modules , but concerns related to localization are more varied that the simple use of a module GNSS that provides geographical coordinates, even if it is one of the most accurate localization means, it is sometimes ineffective or just too complicated. First problem is posing by the human understanding of the information received, requires from us a translation from what we know, the GNSS signal is no longer available, moreover, in a building we reason according to the corridors and rooms, and not on the basis of geographical coordinates or streets, the knowledge of the location of each mobile unit is a mobile component-specific characteristics Unlike fixed networks where a number corresponds to a fixed physical address, a mobile unit number becomes, from the point of view of the network, a logical address that is no longer fixed, while in fixed networks, an inactive unit (that is not communication) produces no traffic in the network.

E: The discovery and access to services in mobility:

In the current context, the computer has become an integral part of our lives, but the research areas remain large, with problems that must still be resolved, one of these problems is that we can't always access the service, despite the ubiquity of computing capabilities in our cities and buildings, to access a service, a large number of communication protocols can pose significant challenges more protocols are sometimes specific to a use case, other times they are owners to service providers, we offer in our work of the theses of a middleware to improve access to services such as RMI or Web Services, while being mobile, it offers a multi-model infrastructure, through which the business code is decouples the code of distribution communications from a mobile terminal can be done with or without a communication infrastructure, the ad hoc world arrives with an extra challenge for communication, mobility of nodes, one finds oneself surrounded by computerized entities and services, but still need to communicate with them, discover the services when they appear and know when they disappeared so queries are directed a negative node to the greatest potential which is located nearby.

Another problem caused by the multitude of services available is lie has relevance for each user, several other works concerned the discovery of services, whether Web Services, services in ad-hoc networks or services in sensor networks.

IV. CONCLUSION

The prosperity of the mobile market is linked in a direct and indirect manner to efforts provide for improving the mobile process for ensures a reliable mobility, however the obstacles that must be overcome are not quite clear, this means think traditional or beyond of the solutions and wicker to adapt, in order to improves mobile processes several factors also influence the choice of the one of water , we present briefly some of the axes of the current research in mobile computing,

as we can see nowadays computing is pervasive mobile? Mobile processes are a natural evolution of computing, moving, the process gains in flexibility, because it maintains its links, these identity changes successive are an originality of mobile processes, this being usually prevents for security reasons, security for mobile process is so a problem more complicated than in conventional systems and in particular in mobile code systems.

REFERENCES

- [1] Matthieu Martel , “Analyse Statique et Evaluation Partielle de Systèmes de Processus Mobiles”, l’Université de la Méditerranée - Aix-Marseille II , 29 Novembre 2000. pp 7-8.
- [2] Nicolas Jaimes, “Taux de pénétration du mobile dans le monde”, JDN l'économie demain , Mis à jour le 17/07/15 18:28.
- [3] Sylvain HUET, “ Sécurité et processus mobiles ”, juin 1996. pp 7-8.
- [4] M.Abadi, A.Gordon. [1996] Pi-Calculus and Cryptography
- [5] Samfat Didier ; Molva R. (Directeur de thèse) ; 1996 [Note(s) : [205 p.]] (bibl.: 106 ref.) (Année de soutenance : 1996) (No : 96 ENST 0006)
- [6] Estimating Software Costs, Capers Jones, 2008, McGraw Hill, ISBN: 978-0-07-148300-1
- [7] Metrics and Models in Software Quality Engineering (2nd ed.), S. Kan, 2007, Addison Wesley, ISBN 0201729156
- [8] plus vaste que le cycle de développement, car un logiciel en maintenance reste une source de coûts de test et de correction.
- [9] Estimating Software Costs, C.Jones, 2007, Mc Graw Hill, ISBN 978-007148300-1 SAMUEL PIERRE : Réseaux et systèmes informatiques mobiles : Fondements, architectures et applications Relié – 5 avril 2003
- [10] Sylvain HUET :Sécurité et processus mobiles juin 1996
- [11] Nicolas Montavont : informatique la mobilité ,2000/2001
- [12] Laurentiu Sorin Paun :Gestion de la mobilité dans les réseaux ambiants, 22 Novembre 2005
- [13] Valerie Issarny, Nikolaos Georgantas, Sara Hachem, Apostolos Zarras, Panos Vassiliadis, Marco Autili, Marco Gerosa, and Amira Hamida, Service-oriented middleware for the future internet : state of the art and research directions, Journal of Internet Services and Applications 2 (2011), 23–45, 10.1007/s13174-011-0021-3.
- [14] [IRRH03] Jadwiga Indulska, Ricky Robinson, Andry Rakotonirainy, and Karen Henriksen, Experiences in using cc/pp in context-aware systems, In Proc. of the Intl. Conf. on Mobile Data Management (MDM, Springer, 2003, pp. 247–261.