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Scaled Agile Framework Design for E-Governance

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ABSTRACT -Social, Mobility, Analytics and Cloud, abbreviated SMAC, are separate platforms with technologies gone up for the duration of last few years and revealed enormous enlargement. Instead of treating these entire four components separately, current corporate organizations are started to treat them integrally. The same kind of imitativeness should be taken care by government also. There are many technical components and systems used by government but there is no integrated technical model to make faster government execution. This leads us to design an innovative and different framework for e-governance to make faster execution of its services. This framework is having different technology combined together to provide E-Governance services.

KEYWORDS: SMAC, E-Governance, Social, Mobile, Analytics, Cloud

I. INTRODUCTION

Social, Mobility, Analytics and Cloud, abbreviated SMACis the new integrated IT model carrying corporate world more connective, collaborative, productive and real-time. In the current IT scenario, in the terms of business productivity, the number of computers rapidly on its way to 100 billion and data volume is mounting 35,000 exabytes which is more than 600 times the data under management at the end of internet era which was before 2012 [1][2]. Social, Mobile, Analytics and Cloud presents a prospect for business sectors as well as for government to increase their revenues by mounting into mega volume margin instead of traditional IT business or e-governance. These four key technologies are working with combination of each other and give revolution of consumer satisfaction of any business sector [3].

Before we are going for SMAC application study on E-Governance, let us deliberate each component of SMAC stack given in Table 1[4].

S	Social Technologies	Facebook, Blogs, Twitter, E-Mail, Wikis, Instant Messengers and other social network services and software applications that promote and assist interpersonal communications, both business and personal
M	Mobile Technologies	Tablets, Smartphones, Personal digital assistants(PDAs), and global positioning systems(GPS) to the network, applications and software which prop up and facilitate robust anytime and anywhere connectivity
A	Analytics Technologies	These present new stages of empiricism and close byfounding a software supply chain of gathering, classifying, overseeing, determining, examining and reporting large volume of dissimilar date on an fragmentary basis
C	Cloud Computing Technologies	This set asides remotely based computing resources which includes applications, database and servers to distributed via Internet instead of internal and permitting for flexibility of resources with minimum cost

Table 1 : Components of SMAC Stack

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Social, Mobile, Analytics and Cloud (SMAC) are well built indication of development so far in which business ecosystems are more digitized and flattering at where information content accounts for a growing proportion of any product and service's entire value.In SMAC, each and every technology is having its own impact and that is in complimentary of task completion[5][6]. People are using more information which contain by Cloud [7]. The Cloud access is available to people by Mobile devices. An actionable sense of the data available in cloud can be done by Analytics. Finally, for finding colleagues for collaborate and co-create social media is available for throughout help. The broad concept of SMAC is helpful to think about its technology integrated from strategic viewpoint deliberate in Table 2 [8].

Trend	Relationship with Task Completion
Social	To Whom, we are performing task with
Mobile	How we get Task completion
Analytics	What we have Task on, The meaning of Task
Cloud	Where we do the Task

Table 2 : Complementary and Integrated Role of SMAC in doing Task

II. SMAC AND E-GOVERNANCE

The term E-Governance explains itself that it is technology driven governance. It is the application of Information, Communication, Technology and Networking for services based on government policies to provide facilities includes information transactions and services between Government to Consumer (G2C), Government to Business (G2B), Government to Government (G2G) and other interaction of entire government framework [9] [10]. The framework also provides transparent, efficient and convenient services of government to citizens in distributed manner. But, the current model and standard of E-Governance is not enough useful to provide better services of e-governance as they evolve complex and slower procedure. This leads to apply SMAC tools and techniques to function e-governance which provides agility to the services of e-governance [11]. There are many state government of India has started moving e-governance in SMAC way. The new generation of e-governance will be known as EGP (E-Governance) 2.0 or e-kranti.

The government is having importance about technology and different tools related to that such as social and mobile so assisting communication among these. The combining SMAC with e-governance is not only the idea to reach out to the citizens with effectively but also encourage excellent e-governance service delivery. In 2013, there was the prediction about to spend 36,800/INR crore on IT by government of India on Information communication technology and networking (ICTN). Many Indians are using internet to consume services based on projects by ministry of information technology which is outlined by National E-Governance Plan report 2004-05. Today's technology is not just restricted to single medium which is leading mantra to rise up concept of Social, Mobile, Analytics and Cloud(SMAC) technologies. The major gaining importance of good governance with political stability is citizen's participation. The major impact of social media in various fields includes research, tourism, education, politics and many more. However, e-governance and its services are not only ruling aspect on social media, the increasing mobile usage also made essential to e-governance. In 2014, there will be a step ahead by government to combine SMAC technologies along with increasing use of social media and mobile and analysis will also pivotal for that. Presently, the government has given different ways to analyse large amount of data available with individual and corporate level to increase Income tax collection by different parameter study[12]. The biggest ever data is the repository by government. There have been, rather double the size of the Indian population, 2.85 billion transactions between citizens and government during last year which emphasise on analytic

In bellow given figure, we have tried to identify relationship between e-governance and SMAC. E-governance felicitates its services to citizens by using SMAC technologies. SMAC, which is combined version of Social
Media, Mobile, Analysis and Cloud computing, is very useful for providing E-Governance agility. There are four technologies connected with each other and represents it as a single technology. This is the IT solutions for increasing the agility of services provided by e-governance. It also increases efficiency of e-government bodies, lowering costs for public services and increases effect of IT investments. Furthermore, it would be quite difficult to adopt SMAC based e-governance if there is low IT cost budget of government, poor IT infrastructure, hard to attack high skilled IT resource person, employee have insufficient IT knowledge.

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III. SMAC BY GOVERNMENT OF ANDHRA PRADESH, INDIA

There is one project by Andhra Pradesh government of India in Hyderabad who have implemented SMAC technologies to provide better e-governance. The project carried out by government of Andhra Pradesh, which uses collected data of global positioning systems (GPS) integral in the city buses for public/social transport improvement. The study includes to determine delays and frequency to the particular route by data gathering which will be useful to identify things that where the new buses are required. Mobility also takes place over here and important as well, just because of more than 5 million people are reaching on regular basis by state governments and federal through mobile programs with includes the education and healthcare related information, as per given data [13]. In this project they have used integrated technological aspect that is SMAC where public transportation is a part of Social and information of public transportation available anywhere with Mobility. The data gathered by GPS is for Analysis purpose and they are also moving their data from physical server to Cloud very soon. There are some other projects also in the queue mentioned by Andhra Government [14].

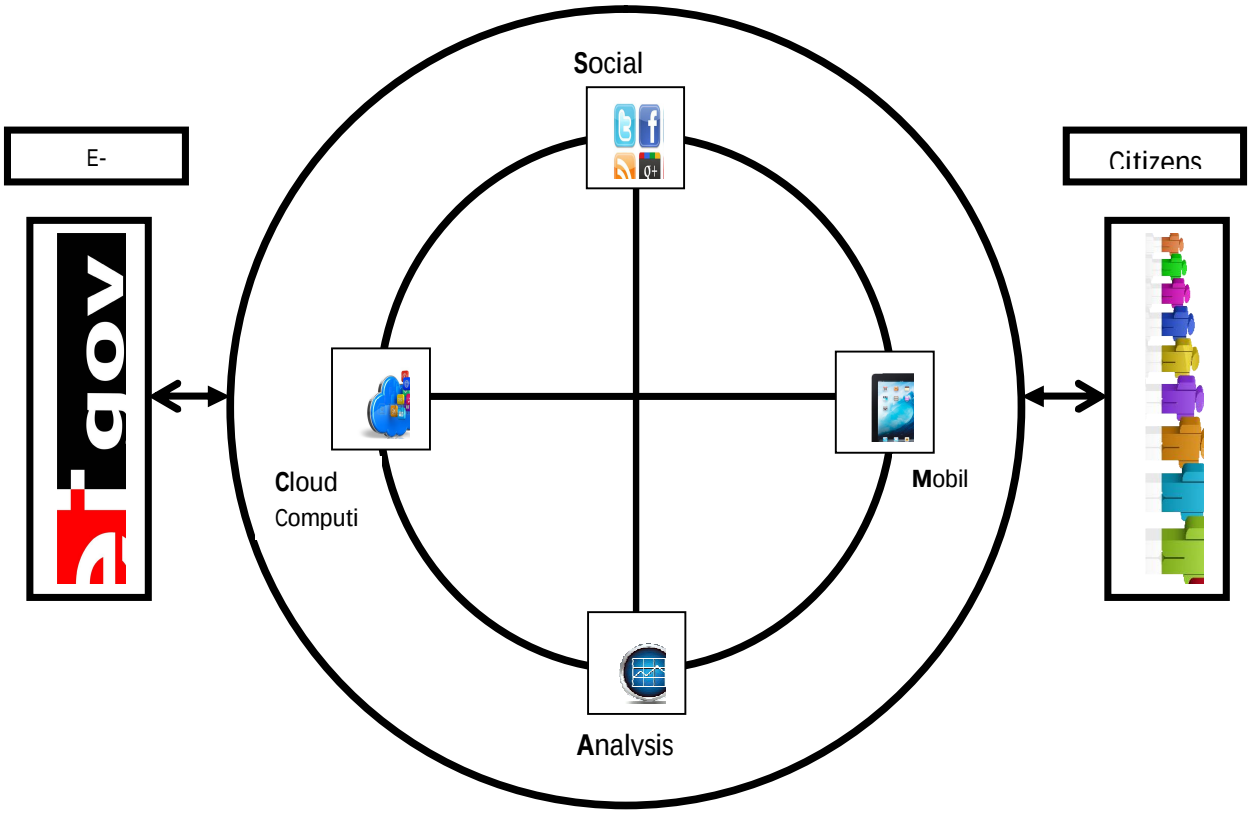

Figure 1 : Relationship of Agile E-Governance with SMAC

IV. SMAC BY GOVERNMENT OF MAHARASHTRA, INDIA

Government of Maharashtra is moving towards M-Governance and Cloud computing usage also. Rajesh Sharma, principal secretary of Maharashtra Government has mentioned about their government adaptation of SMAC to provide better e-governance [15]. They have totally moved to the cloud and no more physical servers are there to maintain big data. They had project of 30 crore INR for computerising whole system of employment exchanges. They have used cloud and reduced costs by 5 crores. They have totally moved to cloud within four months which helped 9 lacs candidates, previously it was 3 lacs only, for ITI admission online. They are also moving forward for mobile based

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citizen centric applications for providing better services [16] [17].

V. PERFORMANCE AGILE OF SMAC TECHNOLOGY IN E-GOVERNANCE

a) SMAC increases exposure of E-Governance related services
b) It provides scope for development of loyal users of e-governance services
c) Helpful to reduce marketing related expenses of g-governance services
d) Provides opportunity to improve services of e-governance
e) It is also improving search ranking of e-governance and its related activity
f) It allows to grow business partnership of e-governance with other business sector
g) SMAC e-governance allows to engage citizens on a more personal level and get insight into their like, dislikes, physical whereabouts, habits and enabling e-governance to deliver more targeted messages and provide individual support for enhancing citizens loyalty
h) This approach allows cost saving as well just because of having limited fund for software, hardware, connectivity, bandwidth etc
i) The platform approach eliminates other types of interface of external entities includes TRAI, Operator, Central Government, RBI, Banking sectors and other financial institutions as well.

The above benefits are not limited but prime consideration. There are also some drawbacks or legal issues in the terms of security of implementing e-governance by using integrated technology SMAC.

VI. RESEARCH DIRECTIONS

a) There are some risk factors in gathering big data while applying SMAC
b) If data is more secure then it would be reduction on restrictions of rights on use of data
c) It would be challenging to protect database also
d) There are some other concern, which can be misuse, in applying result of analysis

VII. CONCLUSION

SMAC is the integrated technology of social, mobile, analysis and cloud where all together provides agile e-governance. It is new in the field of IT and also having few drawbacks which we have discussed above. Presently, the data available on net as well as server of any business or government sector is very big data which requires analytical storage by cloud and mobility access by social media. So SMAC technology plays very pivotal role to provide all the functionalities which we have discussed above and we are looking forward to have time of SMAC adaptation in education and health care to provide better life to any individual.

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BIOGRAPHY

Dr. Hardik Gohel is an Academician and United States based computer science researcher in the field of cyber security. Gohel has done investigative study of social media and also identified its security issues. Dr. Hardik has done more than 50 research publications and authored 3 books.