eGovernance
in
District Administration

District Assignment

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eGovernance in District administration

Introduction

In Himachal Pradesh, the SDMs do not have Fax machines. I later learnt that the fax machines that are there in most SDM offices are from the Election Commission, and that they are there for the Returning Officers. Elections happen not everyday, despite the rampant cynicism regarding their frequency. The fact that a senior law and order and revenue functionary does not have a simple and important communication medium strikes me as symptomatic of many of the ills affecting our 'system'. It is interesting that while the *IT Act 2000* deals with various facets of use of IT in all sectors of life, including government, and that while Chapter III is titled ELECTRONIC GOVERNANCE, it does not define it. Of further interest is that while the *District Training Handbook*, that humungous essay in confusion[1] in its Annexure 2.7 uses such fancy words as *cyberspace*, *homeshop* and *telecommute*, it does not use the word eGovernance once! Much of the writing on the topic of electronic governance is based on surmise, and verges on the level of fantasy or sci-fi; viz, "Imagine receiving a note saying that, in future, an environment magazine you subscribe to would be available only on the internet [Annexure 2.7]'[2]. An understanding of the term, therefore, is at the very forefront of our endeavour to understand the concept.

Let's check out Wikipedia: "eGovernance refers to the use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses, and other arms of government[3]". It then goes a little too technical for reproduction here, but the emphasis on the internet as a platform makes this definition a little too exclusive for the Indian context, although it makes amends later in the body of the article. For our adventure in the district, we have to first device a workable definition of eGovernance[4]:

> **eGovernance is the use of electronic and computing media connected through a networked architecture to, primarily, better**

[1] If I need to confuse my audience, I now know how to write a book.
[2] While the fact is that it has been a reality for far too long – more magazines are available exclusively online that they are available offline, but then you would have to define what a 'magazine' is before you start on a count.
[3] http://en.wikipedia.org/wiki/E-Government.
[4] There are various spellings of eGovernance: e-governance, e-Governance, E-governance, etc. eGovernance is the format used in this document for the reason that the hyphenation has become superfluous now – eGovernance has become an accepted and understood terminology. G is Capitalized to emphasise that the root word is still governance.

perform traditional government functions, and secondarily, to perform those functions of modern governance that could not have been achieved otherwise in the tradition format.[5]

This definition emphasizes upon certain issues:

1. Governance is the princess, technology is just the handmaiden.
2. eGovernance might or might not be based on internet architecture, but some form of networking is essential to achieving effective eGovernance.
3. eGovernance is intended to do the tradition governance and office functions as well as new functions that would not have been possible through the traditional format. Thus, it does the old work in a new way, as well as performs some new functions.

This is also the right place to clear some misconceptions regarding what eGovernance is NOT:

1. Using MS Word to draft an office letter where one used the Remington or Godrej Prima earlier is not eGovernance.
2. Putting a webpage on the internet without any thought out plan and strategy, and without effective maintenance is not eGovernance.
3. Installing expensive equipment for video-conferencing because that is the *in thing* and seldom using it, is not eGovernance.
4. Having an email ID and not using it is not eGovernance.

[5] My own definition.

How it works – a reality check

While I have not had to occasion to review the status of eGovernance in other states, during my interaction with NIC I was led to believe that the status here in Himachal is pretty advanced. In fact Himachal has a few advantages of governance where eGovernance can reap a lot of benefits:

1. The population is less. An automated system works fine in such a system (in fact it works fine even with a large user base, but this is just to dispute the fact that small populations cannot sustain computerization – I say, take a look at the West). We have two districts to the East where even road access is closed for much of the year. A wireless based eGovernance platform would work very fine there.
2. Himachal is a well governed state. There is intense bipartisan focus on development.
3. People are decently educated, compared to the national level. Thus user base is sufficiently trained.

At one level eGovernance initiatives are to be noticed in many fields. For instance, the Treasury department has been computerized and all billing is computerized. The best part is that a dedicated software has been installed. The bad part is that the Treasury branches have not been connected – so cross-checking is not possible, nor is compiling of data. Local Treasury offices are yet to be computerized. Thus, data transfer between the District Treasury and the sub-treasuries are not possible as of now. There are plans to connect the various District Treasuries at a later stage.

If we come to the Collectorate proper, many of the departments have computers installed. Many among those have some form of software running dedicatedly for the functions being performed therein. There is a Video-conferencing room in the Collectorate[6] which can be used to schedule meetings with the Secretariat without

[6] In the months since I have been in the district, I think the VC has been used only four of five times by the DC, a couple of times other user departments, and about a dozen times by NIC itself. The data transmission is done through a dedicated line operated by NIC. A much simpler way to do this thing would be to use the VC services of a third party, and pay for it. In most larger cities Reliance has VC facilities in the Reliance Webworld shops. The advantage is that you don't have to buy and maintain expensive hardware. You can use better services provided by third party.

the DC having to move to Shimla. The Grievance Redressal Branch issues computerized *challans* to the user agency along with the original application which are sent through *dak*. The Diary-Despatch section has a logging software to lodge the receipts and dispatches. On the negative side, there is much that can be done. Computerization happened in installments without a guiding vision, so different systems run concurrently without any [intelligent] interaction. Most of the branches are still to be comuterised.

Some of the other departments where there is no computerization are the Excise and Taxation Deparment and the District Food and Supplies Controller office. The BDO offices do not have any office or inventory software. No software for the various schemes has been devised. It is obvious that there is a lot of scope in any field for eGovernance.

And any department can use it to schedule their meeting, unlike the present system where user departments make use of VC only with restraint. With sufficient bandwidth available, there are many software and online facilities available that can do the job much more seamlessly, and effectively – the DC can hold daily meetings without even calling the DIO to his chamber. Even the plain vanilla Yahoo! Messenger does a decent work, assuming in the first place that I am interested to see the faces of a few old men in the first place.

POPing Mushrooms

Where eGovernance initiatives have been made, a common complaint is that the service does not happen at the customer doorstep, and that accessibility is a problem. The guiding philosophy seems to be that 'if the mountain won't come to the Mahomet, the Mahomet must go to the mountain'. However, before working on this philosophy certain issues have to be addressed beforehand; for instance:

1. What is the threshold of acceptance of the process? Is it sufficiently successful and sufficiently popular to be extended to the doorstep?
2. What is the technology that is being used for the extension? Can the same process be provided through a web interface? Is the cost of introduction less than the purported benefit (cost-benefit analysis)?

Under the National eGovernance Plan (NEGP[7]) a three pillar model for delivery of "web-enabled Anytime, Anywhere access" has been planned:

1. Connectivity: State Wide Area Networks (SWANs)/NICNET
2. National Data Bank/ State Data Centres (SDCs)
3. Common Services Centers (CSCs)[8]

The CSCs are the service shops at the customer doorstep which are to be built on a PPP basis and manned by a Village Level Entrepreneur (VLE). The CSCs are supposed to provide a lot of services – G2C[9], G2B[10] and others. Since extension of G2C services requires many legal and procedural changes, they might take a while. So, even private services are sought to be provided, through tie-ups with private service providers. These might include billing, reservations, information, etc.

On the ground in Himachal Point of Presence centres (POP) have been opened with computer hardware, dedicated space for hardware, even generators at most Tehsils, SDM offices or BDO offices (or in one of them where they coincide spatially). At the national level this is a huge investment, running in thousands of crores. But the simple question to ask is what the citizen is going to gain today. On a trial basis in Shimla a POP is running which is providing, *inter alia*, such services as hotel

[7] http://india.gov.in/outerwin.htm?id=http://mit.gov.in/default.aspx?id=115
[8] The CSC policy document: http://www.mit.gov.in/download/cscguidelines.pdf
[9] Government to Customer/Citizen
[10] Government to Business

reservation and train reservation. More than half of the services mentioned in the catalogue of services available are easily available on the internet. To make those services available even in the most remote locations, all one needs is a $100 computer (yes, there are options available[11]), and a $3[12] GPRS receiver[13], and an interested entrepreneur. For most G2C services to be available at the customer doorstep, there has to be enormous systemic and procedural changes, including hundreds of amendments in all the states (since most of the G2C services can be affected only through amendments in state laws). IT Act talked of Digital Signatures eight years back. In the state and district administration it is not used at a single location even today. Till such time as one can see real benefit to the citizen, one has to be skeptical about this humongous project. The eSeva[14] of Andhra works on a much better model where the service centres are virtual extensions of PCO counters.

[11] See the One Laptop Per Child (OLPC) project: http://laptop.org

[12] A Froogle (Froogle is Google Product Search) search yielded this: '355015 - Sony Ericsson GC89 Quad-Band EDGE/GPRS/GSM, GC95 UMTS/EDGE, GC99 UMTS/EDGE/WLAN (WiFi) Wireless Data PC Card Cell Phone Antenna Adapter' for $14 [http://www.wpsantennas.com/index.asp?PageAction=VIEWPROD&ProdID=430]. Chinese made uni-band GPRS-only card ordered in bulk would cost a fraction of this. An unlimited GPRS connection costs Rs. 200 per month at 100 kBps. Another option is the BSNL CDMA wireless PCMCIA card which comes for Rs.2700, and monthly GPRS subscription of Rs.200 for unlimited download with a bandwidth of 144 kBps [See http://www.bsnldatacard.com].

[13] The Indore Inter-City Bus Service uses the same technology very smartly. GPS locators in the bus relay bus location to the service centre, which relays the information live to all bus stand display boards through Rs.100 GPRS receivers attached to the display boards. It works, as we have seen it in operation during our Urban Body Attachment during Bharat Darshan.

[14] http://esevaonline.com/

Operational Platform of eGovernance Initiatives

In the recent and influential book by Thomas L Friedman, titled *The World is Flat*[15], the author argues how the infusion of certain technologies and systems have rendered the old world advantage of scale and volumes rather ineffective. These new technologies have enabled modern day Davids to take on old world Goliaths, and at times beat them. Increasingly, both the upstart and the established are taking recourse to the same technologies and conceptual models of management. At the technological front he talks about ten flatteners which made a level playing field possible:

1. Collapse of Berlin Wall
2. Netscape
3. Workflow software
4. Open Sourcing
5. Outsourcing
6. Offshoring
7. Supply Chaining
8. Insourcing
9. In-forming
10. The Steroids

Apart from the first, all these are technological flatteners. Post the dotcom bust of early 2000s, some new concepts have been adapted that has had great significance. Many of these concepts are built around how data moves and who owns them, and beyond that, how you use that data. The 1990s way was the way of the Microsoft, where a large company would put in massive investment, come out with a product that is user friendly and decently addictive due to the novel capabilities, and then push the product through means fair and foul, till such a time that you capture enough market and create enough reliance on your product platform to extract allegiance (willing and unwilling) towards your products.

The Microsoft model worked very fine for a while – till last month Bill Gates was the richest man on earth, a title he held for more than a decade. This model believed in closely guarding its source code. The newer model is substantially different. It believes in giving access to its source codes to different levels to

[15] http://en.wikipedia.org/wiki/The_world_is_flat

increase acceptability. The greatest access is given in a format called Open Source, where any user can do virtually anything with the source code he got from an Open Source source. For reasons which are rather obvious, this model became very popular, and an architecture developed on this model – the LAMP architecture: Linux, the free Operating System; Apache, the free web server; MySQL, the free database management system; and [Perl, Python and] PHP the free programming languages and interface. This quartet virtually provided all the ammunition one needed to make most imaginable products on the internet. Mr. C Umashankar[16], an IAS officer of Tamil Nadu cadre, starts one of his PPT presentations (made with MS Office PowerPoint) with this apology: "Apologies for not using Open source software, the only best choice for e-governance"[17]. This sentiment which is foresightful and looks fifty years beyond clashes quite dynamically with realism that looks at present day constraints. Herein lies the question of choice of platform.

Most computers in our offices and homes are installed with copyrighted software, essentially Microsoft products. Ever since we have known computers we have been using MS products, starting from Windows 95 to Windows XP (very few have installed Windows Vista as of yet). As a result, we have become used to and become comfortable with MS products – through use, we have learnt to use it. There is great logic in push for MS products in offices – there is no need to retrain manpower with new software since many of them already know use of MS products. Plus, MS products are easily available with lots of help and support, and they are user friendly with great user interface. Open Source is as good as the programmer who built it. There is minimal support. Not many people use it, so learning curve is high. Loading of multiple OS on a single computer is frequently troublesome, and there are frequent crashes, which can be catastrophic in a productive environment. All reasons why MS products should be used.

But then there is the opposite philosophy. It says that open source software comes for free. You can modify open source any way you want to suit your purpose.

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[16] Mr. Umashanker was the Collector of Tiruvarur district of Tamilnadu from 1999. It was during his tenure that Tiruvarur became one of the most celebrated districts in the field of eGovernance. A Case Study is available at http://beep.server55.jepponet.dk/egovindia/ShowCase.asp?CaseTitleID=918&CaseID=1494&MenuID=16.

[17] www.orissa.gov.in/e_governance/presentationMaterial/PRESENTATION/DAY%202/Day2-Sess2/D2S2%20C%20UMASHANKAR.ppt

It is safe[18], scalable[19], cross-platform[20]. There are many office application suites available[21] which are very close to MS Office suite, like the popular OpenOffice.org Office Suite[22], adoption of which would not entail retraining. The fact that not many people are computer-literate to begin with means that they can be taught any platform, and as such there is no logic to tie their training to proprietary software. Adoption of Open Source does not tie our future to any specific line of products, and this provides us operational freedom to decide on future systems. The most admirable aspect of Open Source is its philosophy, which makes it very much attuned to public service to which all governments are dedicated.

Most policy makers and system builders, if they think along these lines, are puzzled. The good thing is that most make up their mind. The bad thing is that most make up their mind in either direction. The result is that we have systems built on both platforms. If and when the time comes to sew them up, it shall not be possible to proceed, and it shall again be required to build everything from new, on a new platform.

To just impress upon this point, I shall point out some real world examples.

Common Integrated Police Application

A GOI mission mode project intended for covering all functions at police stations, CIPA[23] is based on Linux OS. Most police stations already have Windows based PC to do some part of their office work. Since loading multiple OSes on a single terminal is frequently buggy, separate systems were ordered for all police stations where CIPA is being installed. The main reason given for using Linux OS is that it is a safe environment – there is no hacking and few viruses. It does not hold much water. To prevent hacking and virus attack, one needs a safe network and a good antivirus.

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[18] Most viruses are designed for copyrighted software, a large chunk of them for MS software.
[19] It can suit any scale or size of operation – the code is as good as the coder.
[20] Most MS products, until recently, did not work on Macs. But then one can very easily argue that Macs don't exist in our offices.
[21] Check out http://en.wikipedia.org/wiki/List_of_office_suites to see a list of available Office Suites. You shall notice that most of them have more proprietary freedom than MS Office – in fact a large number of them are in Open Source domain.
[22] http://www.openoffice.org/
[23] http://ncrb.nic.in/CIPA.htm

A further lacuna of CIPA, which the project promises to plug sooner rather than later, is that the CIPA database in one Police Station does not talk to another. I talk of these in *Make the databases talk – mashup*.

Grievance Redressal System

In the Mandi Collectorate, one can find all sorts of computers. Some are connected to the NIC internet. Some are Windows based and some are Unix based with its text based interface. Many of the operations which have been computerized, like Grievance Redressal and Diary/dispatch, are still based on the Unix platform. The Unix machines are vintage and there are no local service providers willing to take AMC[24]. NIC personnel are not trained in UNIX nowadays, unless they are from UNIX background, in which case most of them are posted in New Delhi. Thus, when the machine falls sick, there is no doctor. The fact that such myriad systems and software exist within a single collectorate is testimony to the haphazard way things have been planned in the field of eGovernance.

MS has been investing heavily in schools in many parts of India[25], providing free computers and software. Similarly, they are partners in many eGovernance projects around India[26]. Critics argue that they are creating a future which will depend heavily on MS products. It is like government acting with peddlers to hook a generation to some addictive product. Perhaps, it is high time there is some guidance from the very top as to the platform to be used so as to ensure a trouble-free future.

[24] Annual Maintenance Contract.
[25] See http://www.businessweek.com/technology/content/dec2005/tc20051208_637935.htm and http://news.zdnet.co.uk/software/0,1000000121,2125764,00.htm.
[26] See http://www.i4donline.net/news/news-details.asp?newsid=5889 and http://egovindia.wordpress.com/category/egovernance-projects-around-country/. The latter gives a list of eGovernance projects in India.

Reinventing the wheel

NIC was initially intended exclusively as a GOI agency[27]. Later on it was made the handmaiden of the State Governments as well. Today, the NIC is a confused lot like the AIS[28] - paid for by one master, being worked by another. And much like the AIS which work differently in different cadres, the NIC too creates a myriad mosaic. The result is that NIC Shimla does not know what NIC Ranchi is doing. There is no central database of programming created, meaning that if I need to look if a similar program has already been built somewhere else, there is probably no way to look, except call around. Programs are being built as frequently as the wish of a DC, and a lot of programs have already been built. My close interaction with some NIC fellows gave me the idea that programming is done in a rather haphazard way. No core-competency is generated – programmers are the same as administrators. If a program can be better built with C#, I would still build it on VB, because I don't know C#. Ego probably plays a part and projects are not sent to the fittest person. While *Bhoomi*[29] has been built way back, most NIC units in the different states are still fumbling with creating their own land admin programs. NIC is very adept in reinventing the wheel; this is precisely why the private sector is using pneumatic tires, and the government is still in bullock-cart age.

[27] For a history of NIC, see http://etawah.nic.in/HistoryofNIC.pdf. "In 1984-85, the Government decided to extend the NIC services to State Governments, Union Territory Administrations and District Administrations in the country", *ibid*.
[28] All India Services.
[29] http://www.revdept-01.kar.nic.in

Technological Blueprint

One can argue that technology and government don't go together. One changes rather fast, the other evolves. One is identified with efficiency, the other is often reviled as slothful and inefficient. Yet, infusion of technology is like transfusion to a terminal diabetic. The government often requires technology. The perplexing thought is that technology seems to change a little too fast for the needs of the government – while the government needs to device a system that will last a generation, the Moore's Law[30] and others set in, changing the very platform on which government might build its systems. It is therefore very essential to seek an understanding into what is just a passing phase, and what is conceptually more fundamental.

Networking infrastructure

Any environment where more than one person works is an ideal setting for a network. The computer network simulates the human network existing in an office setting – there is nothing more fundamental. Therefore, all eGovernance initiatives should be built on a networked infrastructure. Networking is a huge and emerging area where many technologies are at play, and it is essential to devise one network that shall be at home in our office. There are various models, like the server client, or the P2P[31] model. So far as the medium is concerned, there is the wireless network and then the traditional wired network. Some prefer wireless for the backbone and wires for the last mile, while others prefer the opposite. One observation that can be made is that too little attention is given to wireless systems in government offices. They are cheap, easy to maintain, and they have evolved into safe, fast and robust systems. For the collectorate, wireless systems within the offices would be ideal. Government offices do not generate the kind of data as in private sector, nor are they as time sensitive.

[30] 'Refers to the advance in computing power per unit cost. Moore's law is based on the observation that the number of transistors on a computer chip, which is a rough measure of computer processing power, doubles every 18 months. ...'. http://en.wikipedia.org/wiki/Moore%27s_law.
[31] Peer to Peer.

A Networked system with dumb terminals

Government tenders are rather funny. You can get the same product at 3/4th the price at Nehru Place in New Delhi or Chandni in Kolkata, but you pay through the nose. Another funny aspect is that most terminals come with a speakers attached – I guess the government wants us to listen to music while we are at work. During the earlier attachment phase I was fortunate enough to use a computer – it had 3 Giga Hertz processor, and a 256 MB RAM[32]. Computer configuration is a very important decision, and unfortunately one where propriety and suitability are the last aspects kept in mind.

A company in Chennai[33] has devised a very ingenious system that has made computing possible at a low cost. This system is based on dumb terminals. Basically, the users are given just the input and output devices[34], and the system is connected by broadband to its central server. Every user is given an account to which he needs to log in every time he wants to use the computer. This means that every terminal is as good as any other terminal – I can log in from any terminal with a user account. All programs are installed in the central server and all housekeeping and maintenance is done from there. This ensures that the user need not be bothered with anything – the user just does what he wants. He need not bother about virus, about backing up his data, about installing new programs, and scaling up the system. This is the concept of dumb terminals. This is the architecture that was in existence in the early days of computing when the PC revolution (which brought down prices to the level where an individual could afford to buy a computer for himself) was still away. While this is just one of the possible models, this would be very ideal for a unit like the Collectorate. This would ensure that cost of computerization is brought down heavily – all you would need is a networked architecture, and monitors and keyboards. The single most niggling problem in office environment is that of maintenance and virus[35], something that eats up a lot of time

[32] Basically it means the mind of an Einstein, and the memory of a nitwit suffering from amnesia; in short, a genetic freak.
[33] http://news.zdnet.com/2100-1040_22-5768208.html. This news article talks about another company called Novatium, but they are also based upon a similar concept.
[34] A monitor, a keyboard and a mouse.
[35] Another marvel from NIC. NIC (at least in Mandi) has only one solution to a virus attack. Format. It is like doing a complete blood transfusion when there is a mild influenza attack. Makes me feel at times if they have ever heard of a program called AntiVirus, apart from the freeware MacAfee they are so fond of installing on all

for both the maintenance guy and the users. Dumb terminals would get rid of the problem at the root.

Make the databases talk – mashup

At the backend of every eGovernance effort is a lot of data. Data to be usable has to be stored and categorized in an efficient and intelligent manner. Any data is as useful or useless as the database. Since the government is doing a lot of things, there is usually a lot of data, and many databases. The unforgivable fact is that these databases are distinct entities. These databases have been kept in solitary confinement, where they don't talk to one another as of now. The CIPA [**See**: Common Integrated Police Application] module in each police station generates a lot of useful data. But since the modules in each police station across the country are not joined together, it is like each police station fighting its own war against crime. The RLA[36] offices in HP use three software called Saarthi (for Driving Licenses), Vaahan (for Vehicle Registration) and Shastra (for Gun Licensing). These databases are not connected to other RLA offices. Thus, if I need to see to whom does an offending vehicle belong, I will have to use my knowledge and guesswork, and then do a search at the requisite office. The mother of all eGovernance initiatives are the Land Administration programs. In HP the relevant program is called HimBhoomi. HimBhoomi data entry is done at the Tehsil level. But since they don't talk to one another, I cannot know if a person who claims he has bought land in a different tehsil has really bought it. The fact of the matter is that all the data is at hand. We just need to get them out of their solitary confinement and let them talk to one another.

Connected closely is another revolutionary concept. In the previous section we had been talking of databases of one project but different locations talking to one another. A whole new world of possibilities opens up if databases of different projects start talking to one another. The concept of Mashup is causing waves in the internet nowadays. To quote from Wikipedia[37]: "a **mashup** is a web application that combines data from more than one source into a single integrated tool; an example is the use of cartographic data from Google Maps to add location information to real-

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computers. And in the name of anti virus, they use the freely available MacAfee. Of course it cannot save from many viruses, as it has a very simple engine.

[36] Registration and Licensing Authority (SDM)

[37] http://en.wikipedia.org/wiki/Mashup_%28web_application_hybrid%29

estate data from Craigslist, thereby creating a new and distinct web service that was not originally provided by either source." Some examples of mashups from the real world of the districts might be:

1. Using Google Maps or other indigenous GIS[38] data source and coupling it with anything:
    a. Land use pattern
    b. Land holding size
    c. Revenue from estates
    d. Indira Awas Yajana beneficiaries
    e. NREGA worksites and works
    f. NCRB[39] data on crimes
    g. Female literacy
    h. Foeticide
2. Using HimBhoomi with HimRis[40] to know who is buying land and from whom. The emerging pattern can be used to make policy decisions.
3. Using CIPA with a GIS data source.

Blog engines and other automated CMS for most websites

There is a fascination in India with websites. Most government departments, collectorates, even police stations want their own websites[41]. Most websites start with a bang, they wither without a whisper. Five pages are hosted on the NIC server on a day of sunshine, and then everyone forgets it for the rest of their lives.

Website design is an expert domain and a whole industry runs around it. However, government websites are mostly made by NIC – one look at it and one can tell they are NIC products. Websites need a decent amount of research on what to put, how to structure it, how to present it. It requires an aesthetic sensibility to add a user interface. Frequently, most offices just need to put static data from time to time for information purpose only. There is no necessity of much programming as user input is minimal. In this scenario what is needed is separation of content addition from design and support. The clerk adding information on the tender need

[38] Geographic Information System. See a list of GIS here: http://en.wikipedia.org/wiki/List_of_GIS_software.
[39] National Crime Records Bureau, http://ncrb.nic.in.
[40] HimRis is the Registration software used in HP. It is used for Registration of all deeds like Sale Deed, Gift Deed, Will Deed, etc.
[41] After USA, India probably has the largest number of government websites.

not know the full form of HTML. He needs to add the details of the tender. He needs a user interface where he can add it. And the data would take care of itself, presenting it in the way originally intended by the system/site creator. Fortunately a way exists to do so.

It is called a Content Management System. CMS was devised to deal with a lot of data in an intelligent manner, and made data management and presentation easy. The best part of the philosophy of CMS was that it separated content from design and took care of the design part. Later on when blogging became huge on the net, blog engines were made in the form of CMS. Today there are many of these blogging CMS which allow users to create free accounts – services like Blogger, Wordpress, TypePad, etc. Blogging CMS is the ideal solution for most cutting edge level website needs. It is a great tool of digital empowerment and enables anyone with an internet connection to add or modify content. Since there are no technical details to bother about there is no need to go to NIC to dot the 'i's and cross the 't's – content updation is seamless. No more broken links, no more outdated data[42].

Email systems for all intra-office correspondence

The Critical Path Method (CPM) is an effective tool of Project Management. In a complex situation it tells us how to tackle a situation – which action would provide the earliest result. If one were to do a system reengineering of a government system so as to reduce the CP (Critical Path) of an activity, one would find that information flow eats up the maximum chunk of time. Information flow, or the lack of it, is the single greatest factor that yields a bloated CP. In the world of communications, the government office is a Galapagos Island, and the *Dak* is the Galapagos land Iguana – a remnant of a bygone world. Dak served its purpose very well, even today there is utility of dak – for instance the Dak Bungalow comes of use when the *sahib* wants to make a weekend trip. Simple efforts in streamlining and reengineering information flow would not only decrease project time substantially, it would also increase efficiency much. The good news is that it is rather easy to do.

Since mid-2007 the Police Head Quarters in Shimla was supposed to have been using email for all its intra-office correspondence. There is no reason why other offices cannot do that same. Tiruvarur district in Tamilnadu, Krishna district in

[42] Almost all districts by now have their websites, but there are many districts where even the name of the DC has not been changed in the years since they are up.

Karnataka, and all offices using DC Suite[43] in Kerala have been using email for a substantial chunk of their correspondence. An email system is cheap to install, trouble free to maintain, and easy to use. There can be multiple backups with no scope of data loss, and retrieval is easy. Cross referencing also becomes very convenient. Since much of correspondence shuttles between two offices, a 'string' or 'conversation' can be maintained between the different replies – we know how easy and convenient it is to use emails and the reply feature, and since the original mail is always there at the bottom, contextualizing is also easy. The best part is that email is one of the most accessible technologies, with most of the people having used it. Learning curve is very obtuse, so anyone can master it in days. Of course, maintenance can be done centrally from the server. Even digital signatures are not required for ordinary mails – just the mail header and the sender would ensure authenticity[44]. Fortunately Digital Signatures were covered in *IT Act 2000*[45], so digisig can take care of the legal bottlenecks. Streamlining information flow is the single most important factor in eGovernance.

[43] DC Suite is a package of application software indigenously developed by NIC Kerala Unit to offer various functions in the District Collectorate. See http://news.kerala.nic.in/imgmulti.aspx?Id=E0647.
[44] For instance, we don't need a digital signature to know that an email has come from a friend. We just see his address and his name, and we know who it is from.
[45] Chapter II – DIGITAL SIGNATURE, The Information Technology Act

Conclusion

District administration is at the cutting edge level with most citizens. It is the Collectorate, along with its downstream subsidiaries, that come in daily contact with citizens. It is this office that provides most of the G2C[46] services; it is this office where most of the grievances are addressed. Therefore, if eGovernance is to become a popular success, initiatives in eGovernance have to be successful primarily in the collectorate. And it is here that we are accosted with some paradoxes.

The first paradox is that the Collectorate is a complex confluence of activities, many of which have statutory ramifications. Land records, land revenue, law and order, grievance redressal, court work, etc. all come together at the Collectorate. The Collectorate is also the nerve centre of all the various departments that have their own departmental hierarchy. Starting eGvoernance in a comprehensive manner at the Collectorate is a difficult proposition. It requires great political will and able statesmanship, as happened in Thirivarur and Krishna districts. The easy way out is starting eGovernance at the departmental and Secretariat level. I quoted the example of PHQ at Shimla – it is interesting to note that the same has not happened at the PS level. It might be found that Secretariats are more computerized and automated than the Collectorates in most places.

The second paradox is that eGovernance is being implemented universally in a scattered manner. Some call it modular, but that is not correct. A module is a small part of a larger whole that is made in parts only – modules join up at a later stage to create the greater whole. Since various projects are taken up by various departments and ministries, with budgets coming under various heads, eGovernance has been progressing in a slipshod manner.

The third paradox is that no attention is being given to maintenance and scaling. A system should be built in such a way that if there is an increase in size tomorrow, the present system can support it. This is all the more important because money frequently flows in installments. High capacity printers have been given to many offices. However, there is no contingency amount with the offices so that they cannot buy paper from the market. They have to wait for paper from the head office, which takes a lot of time. Similarly with ink cartridges. One runs out, then a requisition is sent, and after weeks of correspondence one might come. The word

[46] Government to Citizen

contingency is not there in office vocabulary. In most private companies, there is a department called Systems that looks after the running of all computer systems. So if the keyboard breaks down, you call Systems, and they provide you with a spare keyboard so you can keep adding value to the company. Nothing like that in government. A keyboard breaks down and you get a government paid picnic at office until the next keyboard arrives[47].

eGovernance proper starts with a proper understanding of its need. It shall be found in many places that computerization is being mistaken for eGovernance. There is no difference between MS Word and Godrej Prima unless you add an email engine. MS Word is the digitization part; email engine is the System process reengineering part – the first is just cosmetic without the latter.

[47] A keyboard at the local Tehsil office where I worked for a while had been broken for months. We were discussing if we should start correspondence on the matter with the DC office, and I decided that it would be better if we ask a customer to get us one. The keyboard arrived in fifteen minutes along with a beaming customer. Since this is a pseudo-official document, let's say that I am just joking.