

KNOWLEDGE SOCIETY VIS-a-VIS DIGITAL DIVIDE

By Osama Manzar

Abstract

Creation of a Knowledge Society through multilingual ICT solutions

We all know that most of the Asian and African countries are more oral in nature and conversation. Their life is moved by means of using local language either in oral or written, and all the natural and original knowledge resources are closely held because dissemination of local knowledge base has no prompt and sustainable means to reach the so called knowledgeable society whose preferential language is English.

Thankfully emergence of ICT solutions is a great source of enabling the local knowledge spread globally, but ICT has its own limitations. Most of the ICT solution does not work in local language. And making the availability of ICT solutions in local language is not only one of the biggest business opportunity but also a chance to bring education to doorsteps of the under-developed population of the world.

To find a solution to India's Digital Divide by making the Information Technology, ICT, and the Internet work in Local Languages in order to offer to the people at the edge of the digital revolution, social awakening and upliftment, economic and commercial viability as well as opportunity, and the possibility to be integrated and be a part of the global village.

This paper is meant to highlight the issues related to the unavailability of ICT products and solutions in local languages specially those belonging to developing and underdeveloped countries. In addition, the paper will also highlight the various necessary components of ICT which working in tandem in local language can create wonders in terms of its reach and impact on a major population of the world. It is also being highlighted about the necessary steps that needs to be taken in terms of standardisation, products and solutions that would promptly enable the non-English speaking population to get networked with the developed society and not only get the benefit of the developed society's knowledge base but to also share the local knowledge base to the rest of the world.

The paper specifically highlights the fact of the potential size of the population living across the digital divide just because of the fact that IT, ICT, Internet and other new economy infrastructure are being restricted by language barriers.

The paper would like to initiate a step forward to create a multilingual virtual community. The community that will be able to read, write, and interact in their own language in

order to create a huge knowledge base about the world which has so far been at the other part of the digital divide.

THE PAPER

“Digital divide” could be the biggest business opportunity

Hi Friends, let us discuss “digital divide” and how DD could be one of the biggest business opportunities, if not in numbers then certainly in volume. There is no denying the fact that “digital divide” is a major issue, or rather, to curb the poverty, information and communication technology have been recognised as one of the most viable solution.

Specifically, to find various solutions to India’s “Digital Divide” by making IT, ICT, and the Internet, work in Local Indian Languages in order to offer – to the people at the edge of the digital revolution – social awakening and upliftment, economic and commercial viability as well as opportunity, and the possibility to be integrated, and be a part of the global village.

The barriers

It is being understood that the innovations in the IT/ICT and the Internet have not really affected the have-nots of the societies, especially in the developing and underdeveloped nations and cultures. IT and the Internet have largely been the assets and luxury of the people for whom affordability has not been an issue.

The barriers to reach IT and Internet to the masses, or better yet, for the have-nots, have been the following among many:

1. IT and the Internet belong mostly to English knowing and speaking people, and it has further diversified into those languages, the economics of which is better, such as European languages, Japanese and some other.
2. The content that is available on the Internet for masses are mostly in the elite languages, the highest of which belongs to English
3. There is no tool/Interface that has been developed to allow the have-nots to publish and create content in their local language
4. There has been no standard software/application interface to allow the have-nots to use in their local language, such as, OSs, and Office Suits are not available in local language enablement
5. The most killer applications of communications, such as email, have not been available in local languages. Even if it does, it has many cumbersome bottlenecks, like font downloads, etc.
6. There has been no basic standard for developing or enabling the IT and the Internet for local languages
7. There has been no effort to educate the have-nots for using IT and the Internet for any language whatsoever
8. There has been no effort to map the have-not population to the IT and the Internet infrastructure

9. There has been least effort, even now, to work in a systematic and sustainable manner to achieve the solutions to the above issues and problems
10. Most of the organisations that are working towards developing language solutions, or doing researches on the requirements of IT/ICT/Internet, do not even discuss with the representative of the people at the other side of the digital divide.
11. No effort has been initiated by the government of India to incorporate a policy on the usage and adoption of ICT and the Internet as the prime responsibility of an MLA to have it in his agenda of responsibilities
12. No effort has been initiated from the government of India on “why she cannot use the post offices also as cyber booths for sending and receiving emails/messages”

The list can go endless. But, blaming only government and listing what could be done is always the easiest way out for such frustrations. It is extremely necessary to see the “digital divide” as an individual as well as moral/social/professional/religious responsibility, and a lifetime opportunity.

Responsibility-cum-opportunity

Many organisations in India are working in the areas of language technology solutions. It is apparent from the fact that we have websites available almost in any Indian language. But there have been no standards. Every website is using different fonts from the other. There has been no standard user-friendly solution to email.

Moreover, there has been not a single NGO or trust which is developing or deploying ICT in the areas of digital divide and for NGOs. It is extremely important to form NGOs having IT responsibilities. Because, business houses having IT solutions are never encouraged to diversify in the local language area as the paying capacity and economic level is not strong among the people across “digital divide” or non-English speaking population.

To match the paying capacity and the economic level of the regional language audience, it is necessary to have the policy of “no-profit-no-loss” for the language solutions providers. It may sound compromising for many business houses, but it will surely turn out to be one of the biggest economic opportunities sheerly because of its volume implication.

Fortunately, there has been a sudden increase in the availability of social funds for fighting digital divide. Unfortunately, however, most of these funds are going to those who are using ICT in rural areas, but such funds also need to find the relevant solution providers, and “social technology entrepreneurs”.

As a first cut responsibility by the ICT solutions providers and ICT NGOs, we can look at the following to accomplish:

1. Develop and innovate the technologies for the development of masses at all level
2. To offer and use ICT and the Internet for the upliftment and social awakening of the people across the digital divide, and create digital communities

3. By means of the usage of ICT and the Internet, convert the digital have-nots into an economic and business opportunity for the social and commercial investors
4. To offer the localised interface to the masses so that they could use the desktop, office suits and other necessary applications in their own language, so that they use ICT for their daily use and purpose
5. To offer all the communication applications in majority of the local languages in India
6. To offer the Internet browser, which is considered to be the window to all the information available on the Internet, in all the major Indian languages
7. To offer news, information, knowledge, and wisdom in any Indian language, by means of aggregation as well as content creation, on the Internet, without any bottlenecks like “asking for font downloads, etc.
8. To offer Internet/web-based multilingual interface to publish local content including news, general information, commercial information, creation of marketplaces, exchanges, etc.
9. To offer the technology (Multilingual Intranet) to allow the local masses to create local communities
10. Information services in related areas using web, email, web publishing, print publishing, books, research, events, seminars, conferences, kiosks, marketplaces and community building.
11. All the NGOs should make the usage of ICT compulsory and also to network themselves together to complement each other’s work, network, and knowledge

How Convergence could be a Solution...

Take the example of TV spread fast & constantly

- 70 million penetration
- 40 million Cable TV
- In just about One decade
- Clearly a mass media

TV’s Success Story

- Rich content
- Full of Entertainment
- News round the clock
- Multi-Lingual
- It is Oral, not written
- No skills to handle/use
- Cheap & affordable
- Community Value
- Relate to even Lowest Common Denominator

What TV is not

- No Interactivity
- No Personalisation
- Only pushes Content
- I cannot watch in my time

- I cannot watch what I want
- No archival and search
- Non-compromising

ICT Devices' bottlenecks

- Not as entertaining as TV
- Requires basic education and skill
- Not so cheap and Affordable
- It's Written, not ORAL
- Not so Multilingual
- Doesn't relate to anybody and everybody
- Depends on too many players
- No value for money

What is the mass consumer?

- Indian and subcontinent mass is ORAL, **not** written
- 70 million TV penetration
- 85 % of the Indian and subcontinent readership belong to Local Languages, not English
- Almost 50 % of India is literate
- The total Indian government offices work in bi-lingual including at least one necessary local language. And government is the biggest creator of information and knowledge
- The second largest network of operational sector is NGOs, who has the largest database of information and knowledge after the government
- All the NGOs or/and their network work in local language
- India's largest FMCG users are from rural areas who only speak local language
- The whole agriculture and commodity sector is local

Convergence could be a Solution...

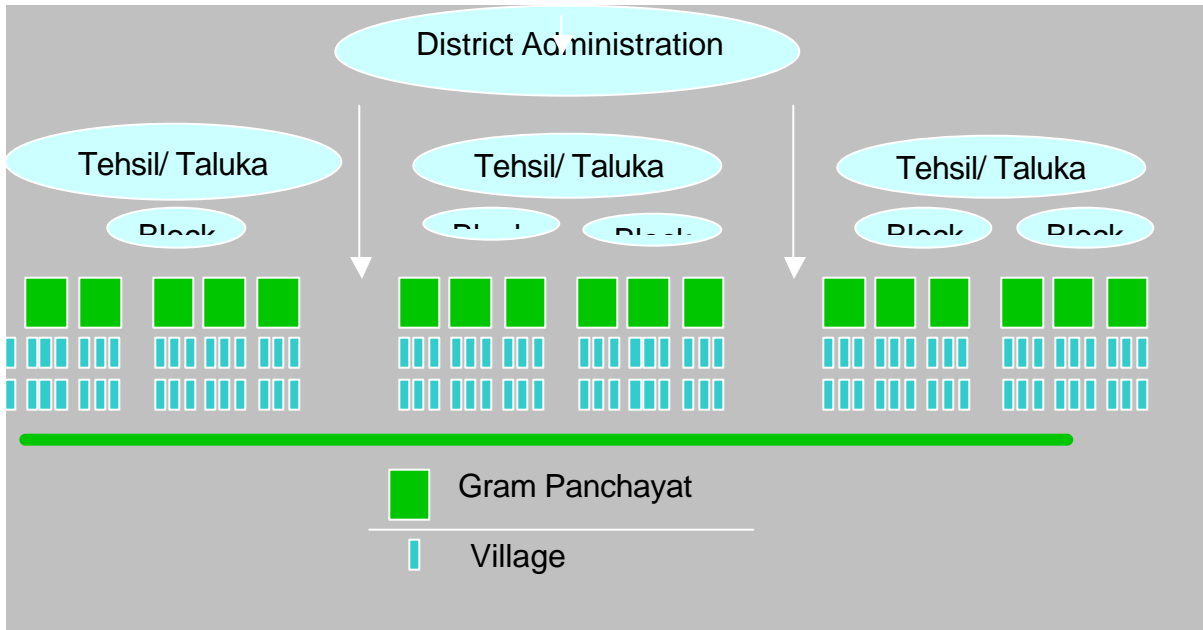
- Unlimited Data/information traffic
- Rich & Multi-media is possible
- TV will become closer to Internet
- Internet will become closer to TV
- Interactivity unlimited
- The Oral society may be able to create content
- Education will go to hinterland
- Language divide will be narrower
- Local content, innovation, and products will go places
- Economic upliftment of the grassroots

ICT & eGovernance

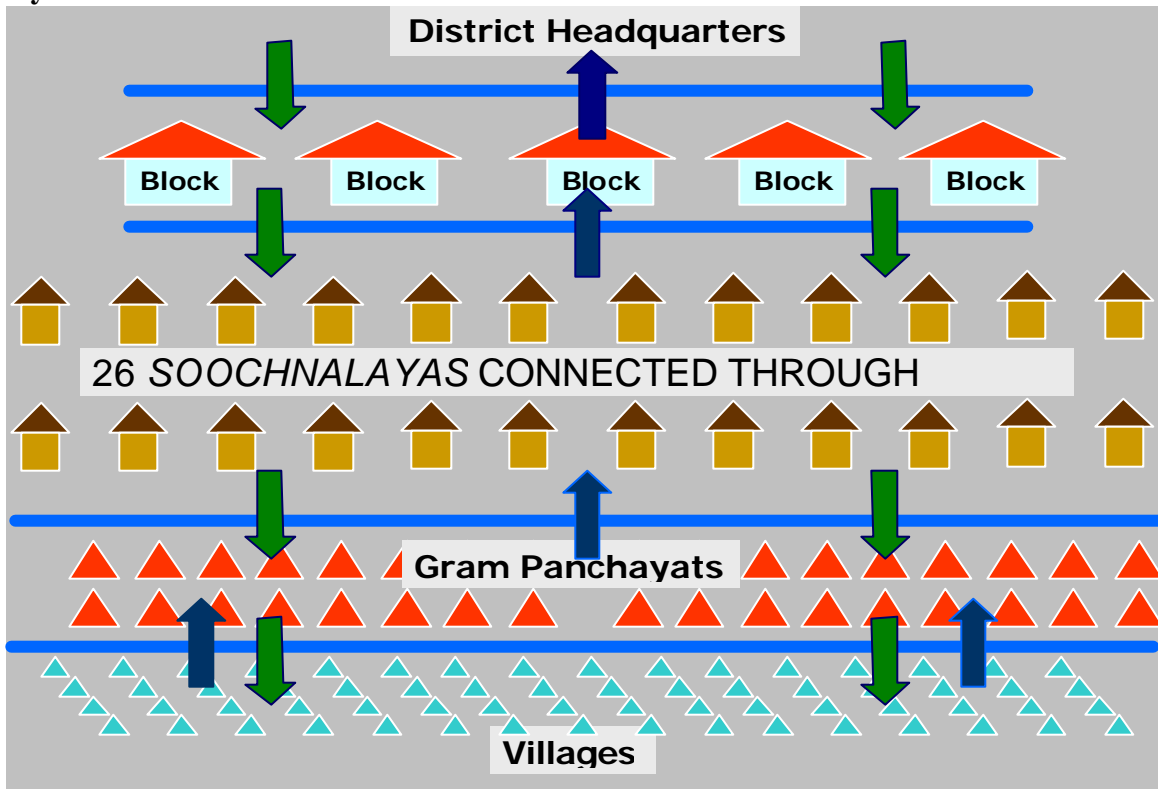
- Government could be biggest user of BB
- For eGovernance
- For connecting villages

- For transparent, profitable, and responsible governance

The Last Mile



Gyandoot of MP



If you give me permission, I would like to share with you some of the work that my company, 4Cplus, has done in the ICT areas, not only in terms of valid application but also the examples of the implementations of the applications by social enterprises and NGOs.

Apps for Social Enterprises

1. 4Cplus has developed a complete portal for **Center for Science & Environment**, for its world famous magazine called '**Down to Earth**' including ecommerce applications.
2. 4Cplus had developed a complete portal for **Development Alternatives** for its initiative called **TARAhaat.com**, in three languages including English, Hindi, and Gurmukhi. The other applications developed for TARAhaat.com are multilingual email, chat, group discussion, etc.
3. 4Cplus is developing multilingual Intranet in five languages for **Charity Aid Foundation, India**, to network CAF's many NGOs across India.
4. 4Cplus had developed a complete CD of the book called Government & Volunteerism for **VANI India**.
5. 4Cplus had developed for itself a multilingual news portal, in nine languages, called **netsansar.org**
6. 4Cplus developed a technology that **converts any font to any font in any language**, thus crossing the barrier of font standardisation.
7. We have also developed a **CMS (Content Management System)**, which is working at TARAhaat.com, in three languages, and **can work in any Indian language**, which is also **platform independent**, works on LINUX as well as Microsoft.
8. We have developed all the necessary communication tools like **Chat, Email, and Group Discussions** incorporating **any Indian language**.
9. Prototype of IE browser for any Indian language is ready, and the work is on to develop further.
10. We are working on offering the Language Suits targeting the audience who work in local languages, within six months under the TRUST that we are initiating called DEF.
11. **You all are requested to join this force to develop solution that should work in local language rather than asking the mass to leave their language and work in English...**

Some examples which can boom using ICT

- Gyandoot in MP
- NIC
- Warana in Maharashtra
- Lokmitra in Hamirpur in HP
- TaraHAAT in the making, New Delhi
- Honey Bee in IIM Ahmedabad
- Many, many more

ICT for Development: What is the status?

- What effort has been there for ICT & Development
- How many ICT&DD projects are on...
- What is the source
- How do you make and manage data on ICT projects in third sector
- Where do you go from there?

Why We Need Database on ICT in Third Sector?

- To simply know the status
- Types of projects
- What technologies
- Effectiveness
- Social, cultural, behavioral, economic change if any
- Learn and improve

There Are Only Handful of Projects

- NIC
- A Social Investor's Guide to ICTs for Development, by Aditya Sood for CAF
- Information & Communication Technology in Development, by SAGE publication
- INOMY

How ICT in Third Sector Can Multiply?

- Through NGOs
- Social Funds
- Corporates
- Government
- Societies, Organisations, Associations, etc

Resources

- www.INOMY.com
- www.4Cplus.com
- www.nic.in
- **BOOKS:**
 - The Internet Economy of India
 - Information & Communication Technology in Dev.
 - A Social Investor's Guide to ICTs for Development, by Aditya Sood for CAF

I would like to hear from those of you, who have interest in such issues and would like to work in these areas.

About the Author

Osama Manzar is the Cofounder & CEO of 4Cplus, the “knowledge technology” company. He has co-authored the book titled “The Internet Economy of India” – www.inomy.com. To fight the digital divide he has formed a trust called “Digital Empowerment Foundation”.

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NAME: OSAMA MANZAR

SPECIALIZATION

Journalism & Media, Information Technology & Management, New Media, Internet/Information/New Economy, and Digital Divide

CURRENT ENGAGEMENT

Cofounder & CEO, 4Cplus (1999 Onward)

After having grown in the IT industry as a media person for more than 5 years, Osama co founded 4Cplus, a "knowledge technology" company, in 1999. 4Cplus is now a well-established 80 people company having 3 offices across India. 4Cplus was started with just 20 people, and have grown to 80 in less than 2 years. 4Cplus has a unique positioning in the industry as an IT solution company having vertical focus on Customised ERP CIO365™ for Media, Manufacturing, and Food Processing industries, Patent pending technology-based multilingual Intranet Knowledger™ for SMEs, Content Management System MediaWrap™, Editorial Management System NewsWrap™ for Publishing business, and Suit of Language Technology solutions for eGovernance, and all kind regional language computing.

Founder & Editor-in-chief, INOMY

Osama also paralely had established a small media set-up for the emerging Information/new economy. This venture is called Inomy Media, and accomplished a webzine at www.inomy.com, a weekly email newsletter that goes to 5000 plus senior executives and decision makers in the emerging economy sector, and has published a well researched book titled "**The Internet Economy of India**" co-authored by **Osama Manzar**. This book, for the first time in India, has quantified the size of the Internet economy in India as US\$22 billion for the year 2000. Inomy's plan is to continue with this book on an annual basis.

Digital Empowerment Foundation (in making)

Since 4Cplus has developed a lot of technologies and solutions for Indian languages, the company has taken an initiative to form a trust or a society to leverage the language technologies in making the people living across digital divide to use information technology for their daily use in their own language. Osama is one of the founder and directors to give this society a shape, purpose, and head start, through his wide network of people in media, IT industry, and NGOs. DEF is already working with organisations like TARAAhat.com, Charity Aid Foundation, Voluntary Action Network India (VANI), TheHoot.org, and many more likes of ICT based development projects.

Speaking for Knowledge dissemination

Osama, in addition, is also invited in various domestic and International conferences as a speaker on topics related to IT, Internet, digital revolution, digital divide, IT & HR, and so on. Some of his recent talks were on **IT & HR in Bangkok, organised by SAARC, ASEAN and International Development group of Japan**; eCommerce & Localisation at IIW; Broadband & Digital Divide at Baroda – India; IT & Third Sector & Knowledge Management for Charities Aid Foundation, New Delhi, and many more.

British Chevening Scholar 2001-2002

Osama has been selected for UK's Chevening Scholarship for Advance Management course for Senior IT professionals from Manchester Business School, Manchester, United Kingdom. The initiative is derived by British Council.

WORK EXPERIENCE

June 1997 - Early 2000

Head & Consultant - Interactive Media Division, The Hindustan Times

When Osama joined HT, the latter had only two people (including Osama) in the Internet department. Osama took bold initiatives in HT, which is widely known as a traditional company, and formed the "Interactive Media Division" and lunched within six months the website of Hindustan Times (www.hindustantimes.com). After its successful launch and acceptance among HT's readers and NRIs, Osama conceptualised to create a separate entity for HT in the form of a portal and lunched DigitalHT.com as India's one of the largest portal followed by Indiatimes.com. Within six months of its launch DigitalHT.com got a deal from Chase Capital and got more than nine million dollar investment in the portal, and thus it was made a separate company. At that time, the Interactive Media division of HT had more than 40 people on roll. However, handing over the responsibilities to HT, Osama found a better prospects in ideating his own venture, and left for good. At HT, however, Osama learnt a lot about entrepreneurship, and how to manage a company and people. Later, it was learnt that DigitalHT.com had been renamed as go4i.com, and yet later, it was learnt that even go4i.com has been planned to shut down and to be merged with hindustantimes.com.

Besides being a netizen of the global village, Osama feels proud for coining the word "INDIA 2.0." As he defines it, "India 2.0 is the second version of India, especially in the light of her growth in the age of information revolution, new economy, MTV generation,

and her software contribution to the world market. He has, in fact, introduced a daily column called India 2.0 in The Hindustan Times." "In other words, INDIA 2.0 covers the activities having affect on India/ns in the post 50-years of independent India entering in the 21st century which is influenced by the digital revolution, and the values of the global village."

Along with the regular job, Osama remained in touch with many foreign journals and magazines as stringer and contributing writers. Some of them were:

>>> **The Industry Standard**, San Francisco-based, an IDG's weekly publication for the Internet Economy in which Osama was a contributing writer since its inception in 1997.

>>> **MIS Asia**, Singapore-based monthly for MIS managers on information management. Osama was stringer with the publication for about 3 years doing various case studies on IT usage in successful India corporate houses.

>>> Beside, Osama also contributed occasionally to Philippine-based **Chief Executive Digest**, Germany-based news agency called **23rd.Com** (www.23rd.com).

December 1994 - May 1997

Assistant Editor, IS Computerworld, New Delhi

IS Computerworld was an Indian affiliate of IDG (www.idg.net) of US, the publishers of Computerworld (www.computerworld.com) of US. The fortnightly targets at the IS managers in the country, and boast a circulation of over 15,000, in a niche market of merely 25,000 IS managers. Osama joined the magazine as a correspondent, with a focus on newsgathering and occasional features. During the early 12 months, he did incisive stories on almost all the major fields within the infotech industry. That gave him valuable insights into the working of the industry, the perceptions of the users, and the needs of the readers. It was during that period of learning that he was exposed to the desk and the nuances of production. This exposure also gave his stories a stronger focus in terms of visuals, charts, word length and the like. He learnt that merely reporting on a beat was not enough; the report needed to be communicated in a simple and reader-friendly manner. Due to his understanding of the highly discerning readership, within one year the expanse of his responsibilities was increased.

As assistant editor, he was singularly responsible for a 16-page section on the Internet. IS Computerworld, was the only periodical then in India, which had a section completely devoted to the Internet. Right from the very first issue, this section became successful not only with the readers, but also with the advertisers. Incidentally, only a few fortnightlies of Computerworld could be seen as Osama's stories not on the cover. Osama owes a lot to the leaders of the IT and IT users fraternity for they taught him in the process of reporting and writing. Osama considers his days at ComputerWorld as the foundation of future endeavours.

January 1991 to November 1994

During this period spanning almost four years, Osama developed a keen sensitivity towards the larger issues addressing the country. These include the environment, economic development, education, and social relations. Using his pen as a tool, he learnt about these issues by meeting people at the frontiers and translating their perceptions into researched reports for the media. The shift from the pen to the keyboard further sharpened his skills. His work during this period is as follows:

>>> In this period he got published more than 150 of write-ups for various national dailies and magazines, such as The Hindustan Times, The Pioneer, The Independent, The Telegraph, The Sunday Observer, etc.

>>> **SOS Children's Villages of India.** This is an Indian arm of the worldwide institution SOS Kinderdorf, Austria, which provides homes for orphaned children. Osama was the editor of this organization's newsletter. This is an Indian arm of the worldwide institution SOS Kinderdorf, Austria, which provides homes for orphaned children.

>>> **Down To Earth.** "Down To Earth" is a fortnightly on science and environment. This is a part of the internationally known Centre for Science and Environment, a non-government organisation at the forefront of policy and development issues. Osama did a series of project reports for this organisation, some of which were used in the magazine.

>>> **Freelance Writing.** While gathering knowledge on these fields, Osama wrote in a whole host of newspapers and magazines. These include, The Sunday Observer (circulation: 10,000), The Pioneer (circulation: 10,000), and The Hindustan Times (circulation: 5,50,000).

EDUCATION

Osama has majored in Physics, with Mathematics and Statistics as the other subsidiaries. Topping his graduation, he completed post-graduate diploma in Journalism. All his education has been completed from the Aligarh Muslim University, Aligarh, one of the 5 central universities and a prime centre of learning in India.

HIS BELIEF

Osama firmly believes that if India wants to by-pass the side affects of the Industrial revolution and still wants to become developed, the only way she can do so, is by means of digital technology. "The beauty, here, is that the future generation will never crib about environmental degradation or any side effect," He says.

HIS GREATEST FEAR

"Technologies are making the world a global village. Great!" "Interactions across the globe have become extremely economical. Yet, my fear is that everything is occurring out of human beings' irresistible curiosity. This homo sapien is becoming so damn busy about work, business, information, information about information, news about information² (square), and so on that they hardly have time to interact with each other in ease and in a natural fashion or as a need of natural desire. The irony is that we are moving from society and culture based interactivity to purely business based interactivity. This may cost us dearly, I am afraid. Can somebody put a barrier on corporatisation of human being?" Osama opines.

PERSONAL DETAILS

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Presentation Title: “Digital Divide” could be the biggest business opportunity

Organisation/Institution: 4Cplus & Digital Empowerment Foundation

URLs: <http://def.4cplus.net>, www.INOMY.com, www.4cplus.com