

PR SENSE

Spreading Positive Vibrations

Issue No 88 – July 2014
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Cover Story of the Month



BRICS 2014
Fortaleza · Brasil

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From the Desk of Editor-in-Chief

We are happy to present to you the 88th (July 2014) edition of your ezine, PreSense with rich contents. *Vijay Diwas* was observed on 26th July to mark the Kargil victory. PreSense joins the nation in saluting the brave martyrs who sacrificed their lives to protect the nation.

In the middle of this month, the book 'Manifesto for change' authored by Dr Abdul Kalam and V Ponraj was released in the market. In this book, Dr Kalam makes a reference to 'Sansad Ratna Awards' instituted by the Prime Point Foundation and your ezine, PreSense. We carry a review of this recommended book. We are happy to share with you that our cartoon character PRince completes 6 years of his journey. As a mark of

celebration, I have included my cartoon sketch here.



The Indian Institute of Technology (IIT) Madras shared with us about their successful and ongoing research project that can provide low cost housing in India. We carry a report based on our visit to IIT Madras and interaction with the Director and professors who have been working on this

We hope you will continue to enjoy this edition and send us your feedback.

K. Srinivasan



PreSense joins the Prime Minister and the nation in paying homage to the martyrs of the Kargil War. Kargil Vijay Diwas is observed on 26th of July every year.



Narendra Modi 
@narendramodi

 Follow

We remember the indomitable courage & sacrifice of our Armed Forces on Kargil Vijay Diwas. The nation salutes these brave martyrs.

11:55 AM - 26 Jul 2014

1,672 RETWEETS 1,681 FAVORITES



Cover Story

The 6th Summit of BRICS at Fortaleza, Brazil – India's Diplomatic Success



The most significant development at the 6th Summit of the BRICS held at Fortaleza in Brazil from July 15 to 17, 2014, was the setting up of the National Development Bank (NDB) with an initial corpus of US \$100 billion, where both China and India, the focus of the world as emerging economies, scored major victories.

NDB HQ in China and India President for the First Six-Year Term

China's victory was in securing the Bank's headquarters in Shanghai, one of the most bustling cities and financial centres of the world. India lost to China in this race of getting the Bank headquartered at Delhi but won the presidentship of the Bank for the next six years. With the Presidentship in hand, India can set the agenda for the Bank, and chart out the guidelines on how the Bank's funds can be deployed for development projects.

India had already won the first round when Prime Minister Narendra Modi insisted that the corpus of the Bank should be shared in matching contributions so that the five member countries of Brazil, Russia, India, China and South Africa can have equal say about the disbursement of funds to different countries.

NDB - Challenge to World Economic Order

NDB is seen by the developing world as a challenge to the world economic and financial order centred around the Bretton Woods institutions. So far, most of the economic activity has been centred round the two institutions of the World Bank (WB) and the International Finance Corporation (IFC), whose corpus was contributed mostly by West European nations and the United States of America. Countries like India, China, Brazil or South Africa did not



have much say in the functioning of either of the institutions because they were down in the list of the contributors to their corpus.

The BRICS' NDB now gives these countries a newfound clout in the world economic and financial order and perhaps a greater say in WB and IFC too. Developing countries can soon rally round the BRICS Bank for funding their public welfare programmes, instead of WB and IFC.

THE ESTABLISHMENT OF THE BRICS CONTINGENT RESERVE ARRANGEMENT WITH AN INITIAL SIZE OF \$ 100 BILLION WILL HELP COUNTRIES FORESTALL SHORT-TERM LIQUIDITY PRESSURES.

<p>Initial authorised capital</p> 	<p>1 The first Chair of the Board of Governors shall be from Russia</p>
<p>Equity base (Shared equally by founding member countries)</p> 	<p>2 The first President of the bank shall be from India</p>
	<p>3 Funds managed by bank management</p>
	<p>4 The headquarters of the Bank shall be in Shanghai</p>
	<p>5 The New Development Bank Africa Regional Center shall be established in South Africa concurrently with the headquarters</p>

Graphics courtesy: The Hindu

Contingency Fund to Insulate Against Exchange Crisis

Another major breakthrough at the Summit was the setting up of a contingency fund of US \$100 billion – a currency chest of the world’s most powerful currencies of the Euro and the US dollar. The member countries or any developing country can draw from this fund in the event of a major currency or exchange rate crisis.

WB Plays Down Challenge - Poverty Alleviation, a Common Goal

The World Bank President, Jim Yong Kim, who was visiting India, did not see NDB as a challenge to either WB or IFC. He played it down, saying the real challenge was the elimination of poverty in the world for both, and WB would guide or help the new bank in whichever way it wanted. He appreciated the new bank as a welcome step.

The 6th summit of BRICS followed the successful meeting last year in Durban in South Africa that first cleared the setting of NDB. Brazilian President, Ms Dilma Roussef displayed tremendous initiative, inviting all the leaders of the Latin American continent as guests of honour to meet the BRICS leaders. This led to a series of multilateral and bilateral meetings with the member countries. The guest countries that attended, included Argentina, Chile, Colombia, Costa Rica, Peru, Uruguay and Venezuela among others. She thus opened the gateway to Latin America, for other countries to invest and trade in.



Brazilian President Bestows Rare Honour on Indian PM

For India, the BRICS Summit at Fortaleza in Brazil meant rare honours – there was a special guard of honour for Premier Modi. Also significant was the fact that Modi succeeded in holding bilateral meetings with not just the Brazilian President but with the other members of BRICS too - Russian President Vladimir Putin, South African President Zuma and China's President Xi Jinping. Modi also held meetings with several leaders of the Latin American continent, particularly from South America.

Argentina Not Yet Inducted as 6th Member of BRICS

Though BRICS had originally planned to induct Argentina as the 6th member of BRICS, the leaders decided not to expand the group for the present.

Fortaleza Declaration - Fostering Financial Stability/Inclusive Growth

The five-nation BRICS forged the Fortaleza Declaration at the end of the summit, declaring a strong commitment "to continue working among ourselves and with the global community to foster financial stability, support sustainable, stronger and inclusive growth and promote quality jobs." "BRICS stands ready to contribute to the G20 goal of lifting our collective GDP by more than 2 percent above the trajectory, implied by current policies over the coming 5 years", the Declaration said.

Appreciating the work undertaken by BRICS' finance ministers, the Agreement said NDB would be based on sound banking principles and it would help strengthen the co-operation among the member countries, supplementing the efforts of multilateral and regional financial institutions for global development, thus contributing to its collective commitment of achieving the goal of strong, sustainable and balanced growth.

NDB Corpus Fixed At US \$100 Billion

The Bank would have an initial authorised capital of US \$100 billion. The initial subscribed capital shall be of US \$50 billion, equally contributed by the founding members. The first chair of the Board of Governors would be from Russia. The first chair of the Board of Directors shall be from Brazil.

A treaty was also signed by the members for the establishment of the BRICS Contingent Reserve Arrangement (CRA) of an initial size of US\$100 billion.

This arrangement will have a positive precautionary effect, help countries forestall short-term liquidity pressures, promote BRICS co-operation, strengthen the global financial safety net and complement existing international arrangements. The Agreement is a framework for the provision of liquidity through currency swaps, in response to actual or potential short-term balance of payments pressures.

The 7th summit of BRICS will be hosted in 2015 by Russia. The venue in Russia and the date for the Summit are yet to be decided.

By T N Ashok, Editorial Advisor

Read the past issues from the following link

www.corpezine.com

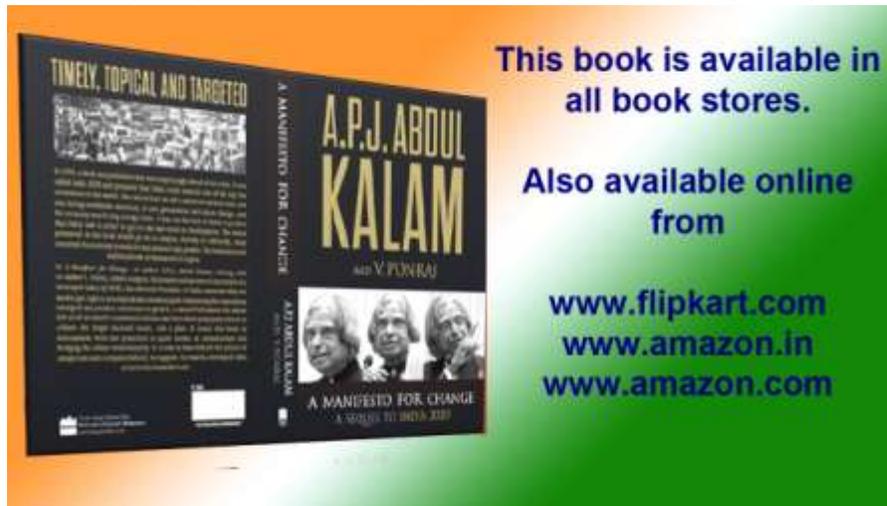


Book Review

A Manifesto for Change – Dr. APJ Abdul Kalam – A Hand Book on Good Governance

Very few scientists and politicians write books for posterity. One of our most popular scientists, a scientist - turned-President, Dr APJ Abdul Kalam, belongs to this rare breed. He writes inspiring books, touching a billion hearts among the youth in India, inspiring them to

cherish values in life, become role models for others and practise good leadership.



This book is available in all book stores.

Also available online from

www.flipkart.com
www.amazon.in
www.amazon.com

Starting with *Wings of Fire*, his first, Dr Kalam's books fall under a rare genre of publications that explore the socio-cultural milieu of the country, identify its faults and offer solutions, besides taking a look at the

future scenario. His books are becoming a blue print for the growth of the nation.

Dr Kalam shares in his books, his experiences as the man who built India's first rockets that launched indigenous satellites on a fledgling launcher called SLV. His achievement led him ultimately to the high-domed presidential palace in an extraordinary journey spanning around four decades. Earlier, he had worked in India's premier defence establishments such as DRDO, and was once the country's top scientific and strategic affairs defence advisor to the Prime Minister and the Central Government, before becoming the first citizen of the country.

From Rockets to the Presidential Palace to Books

Dr Kalam's latest book, *A Manifesto for Change*, co-authored by his scientific advisor, V Ponraj, was released in the capital, New Delhi on July 14, 2014.

A Manifesto for Change – A Non-Political Piece of Work

"A Manifesto for Change" seeks to influence the thinking, with out-of-the-box creative thinking of the political system. From the *Panchayat* to the Parliament, it is a guide for practising sustainable politics and development.

It is to be a guide for anyone who is in the public service or is interested in entering public service politically to transform the nation economically and politically with inclusive policies for equitable growth.

The book serves as a guide for those who look to contesting in elections – from *Panchayat* to the State Legislative Assembly to the Parliament. The book is non-political, and talks about an innovative political system, which can help in evolving an inclusive governance system for the people. It helps to bring about a sustainable governance system in every



domain and every sector of the economy, to help the citizens become globally competitive, say the authors, Dr Kalam and V. Ponraj.

Good Governance Linked to Political Career

For the youth who seek a political career, with a vision to provide good governance to the people, this is the book to read and follow. It elaborates on how to work with integrity and succeed with integrity. It also seeks to identify for the people, the eligible voters and the right type of candidates, irrespective of their political affiliations. It also guides the people on how not to be tempted by such considerations as bribes, the caste or any other adverse factor.

Panchayat to Parliament – The Journey, Governance and Politics in the Best Sense

The book sets out an agenda for the “Panchayat to Parliament” journey for the political leader and helps him or her to evolve a vision for sustainable development. A typical Indian family in India can learn to be politically aware and not be influenced by political alignments when selecting their candidates during an election.

In short, “A Manifesto for Change” spells out what true governance and politics is, in the real sense.

By T N Ashok. Editorial Advisor

Exclusive interview with V Ponraj, Co-Author of the book

On behalf of your ezine PreSense, we recorded an exclusive interview with V Ponraj, co-author of the book on the objective of this book. Please visit the following link for the interview.

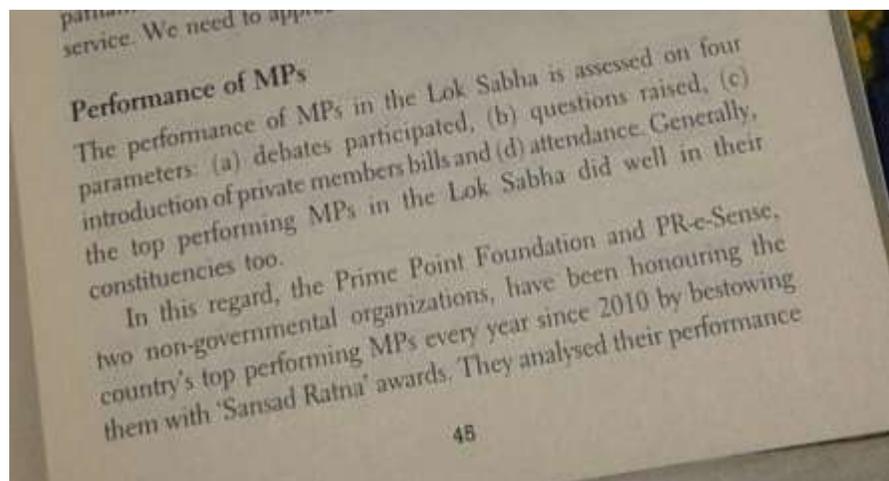
http://youtu.be/EbpWPhHdoQI?list=UUQG_NdaUdZQhuTn1OxRCunQ

Dr Abdul Kalam mentions ‘Sansad Ratna Award’

Dr Abdul Kalam made a reference to the ‘Sansad Ratna Awards’ instituted by the Prime Point Foundation and your ezine PreSense, in his book. He also carried exclusive interviews with four MPs, who were recipients of the Sansad Ratna Awards.

While acknowledging the confidence reposed on us, we re-dedicate ourselves to serve the nation with more energy.

- **K. Srinivasan, Editor in Chief**



Controversy

CSAT – Civil Service Examination

In the last week of July 2014, IAS aspirants in North India went on a mass protest against the CSAT (Civil Service Aptitude Test), introduced as the second paper in the preliminary examinations for the Civil Services. This protest echoed in the Parliament, leading to adjournments.

Introduction of CSAT

The Union Public Service Commission (UPSC) is an independent body that selects candidates to various positions in the Central Government. Earlier, the selection of suitable candidates to the Indian Foreign Service (IFS), the Indian Administrative Service (IAS), the Indian Police Service (IPS) and other allied services, were done at two levels, viz. the main examination and the interview. Since several hundred thousand candidates applied for hundreds of posts, in 1979, UPSC introduced a three-level system to select the candidates.

A preliminary examination was conducted to select the candidates to the next level of screening, the main examinations. Out of the number of candidates writing the preliminary examination, about twelve times the number of vacancies were selected for the main examination.

In 2014, about 8 hundred thousand candidates applied for the Civil Service examination. Usually, four to five hundred thousand candidates write the preliminary examination. Though not declared officially, there is an estimated 1200 vacancies. Nearly twelve times the vacancies, i.e. 15,000 candidates might be selected from the preliminary exam, to appear for the main examination.

Pattern of CSAT

In view of the growing number of IAS aspirants, and the challenges faced in the administration, UPSC altered the format of the preliminary examination by including a paper labelled 'CSAT' (Civil Service Aptitude Test) to test the seven critical skills as comprehension, interpersonal skills, logical reasoning/analytical ability, problem solving/decision making, mental ability, basic numeracy and data interpretation. This paper is set in the English language level of Standard Ten. There would be 80 objective-type questions for 200 marks. The candidates need to tick the correct answer from the options.

The Hindi translation is also provided under each question, so that the candidates can answer either in English or in Hindi. Just 8 questions (out of 80) test the simple comprehension skill of the candidate in English. For these 8 questions, no Hindi translation is provided. Incidentally, only graduates are eligible to appear for the Civil Service Examination.

UPSC CSAT Controversy

Objections from Hindi states

- > Hindi translation is tough
- > Advantageous to urban students with engineering background

Objections from Non Hindi states

- > Only Hindi translation given. Candidates from Non Hindi language states are in a disadvantageous position

Supporters of CSAT

- > The candidates who are going to be top bureaucrats of the nation should have a minimum English language skills. UPSC expects only 10th std level English in CSAT
- > Aptitude is more needed than mugging up skills.



The CSAT paper was introduced in 2011 and UPSC has already run this examination thrice under this new system.

Controversy and Objections

- ❖ The Hindi belt students argue that the translation into Hindi is of a higher standard. According to them, people with the knowledge of the English language have an advantage. They allege an unfair level-playing field between the rural and the urban students.
- ❖ The non-Hindi speaking students argue that the paper provides only the Hindi translation. Non-Hindi speaking students, who are not comfortable with English, are unable to depend on Hindi as their Hindi-speaking counterparts could. They complain that the Hindi-speaking candidates have undue advantage of the Hindi translation.

They in turn, allege that there is no level-playing field between the Hindi-speaking and non Hindi-speaking candidates and that this is discrimination. They demand translation in all the 22 approved Regional Languages.

This problem had cropped up on an earlier occasion. The previous Government (UPA) had then set up a 3-member committee to examine the issue. It may be noted that UPSC is an independent body and is not under the control or aegis of the Central Government. The Union Minister has announced that he would request UPSC to postpone the exam. Technically, this appears improbable to happen.

Perceptions of Different People

Priya, an IAS aspirant, says that the new system does test the aptitude of the candidates, instead of the 'mugging up' (learning by rote) practice. As a South Indian candidate, she feels it is biased towards the Hindi-speaking candidates and she questions why Hindi translation should be given for an English paper. She questions why an IAS-aspirant, who cannot understand even a Tenth Standard level of English, should aspire to join the Civil Service.

Shankar, who runs a well-known academy of coaching for IAS, says the urban candidates and IIT/IIM graduates find the CSAT examination paper far easier than the others. He also feels that the current format of the question paper is advantageous for the Hindi-speaking students besides the science and engineering graduates.



Selected officials cannot be removed during their service. Hence, the selection has to be carried out carefully, so that most suitable and meritorious candidates get selected through a selection process which offer a level playing field to the aspirants. - R Nataraj ”



R. Nataraj, former Director General of Police and former Chairman of the Tamil Nadu Public Service Commission, says the IAS aspirants need to have an aptitude for problem-solving and decision-making, and a basic knowledge of the English language. He says the selection process cannot be conducted according to the candidates' terms, but has to be designed to suit the changing requirements of the

employment sector. He makes a clear distinction between election and selection. While the politicians who are elected can be removed after their term, the selected officials cannot be removed during their service. Hence, he feels the selection has to be carried out carefully, so that most suitable and meritorious candidates get selected through a selection process which offers a level playing field to the aspirants.



With the impending elections in the Hindi belt and other states, there would be more political pressure on UPSC to dilute the quality of the selection process for the top civil service posts. Few will have the courage to stand by the demand for upholding high standards of the candidates, to equip them to meet the global standard. They fear being accused of being 'anti poor' and 'anti rural'.

The Only Solution – Let the Candidate Prepare His Own Question Paper and Write the Examination!

(With tongue in cheek) The only solution to the problem is to permit the candidates to set their own question papers on subjects they are comfortable with, in their preferred language, and write the answers to those self-selected questions in the examination hall.

This way, UPSC would not have to worry about setting the question paper and can save on printing costs. Depending on the other parameters, additional marks also can be given to satisfy all the stakeholders.

By K. Srinivasan, Editor in Chief

Our cartoon character 'PRince' completes 6 years of his journey with this July edition. The cartoon character, created by Triambak Sharma (Raipur), a well known cartoonist of India, was launched by Dr APJ Abdul Kalam at Raj Bhavan, Chennai on 24th July 2008 (See the story below under the archives section). PRince represents the aspirations of the new generation. The Editorial Team congratulates Triambak Sharma and his pet, 'PRince' and wish many more cartoons.



**Triambak Sharma,
Cartoonist**



Cartoon Character 'PRince'



From the Archives of E-zine PreSense – July 2008

'King' Blesses the 'PRince'



Inspired by the talk of Dr Abdul Kalam, former Indian President, **PR-e-Sense** has introduced cartoons from the May 2008 issue. Subsequently, we decided to create a new cartoon character symbolising the PR youth. When we floated the idea in the PRPoint and Image Management groups and sought suggestions for a name, we received nearly one hundred suggestions. Ms Uma, one of the members and a communication professional from Chennai, suggested 'PRince', which was accepted by all. Mr Triambak Sharma, Editor, Cartoon Watch, the only cartoon magazine of India, thus created 'PRince'.

In the first cartoon, **PRince** takes blessings from Dr Abdul Kalam to start his journey into the future issues of the ezine (see cartoon above). PRince is in line with the 'common man' character created by the noted Indian cartoonist, Mr R K Lakshman. When the cartoon was presented to Dr Abdul Kalam during his visit to Chennai on 24th July 2008, he examined the cartoon and appreciated the concept. He also said, "all cartoons should bring smiles". Impressed with the cartoon, Dr Abdul Kalam, spontaneously signed on the cartoon as an acknowledgement of his greetings and his appreciation. The cartoon with the signature of Dr Abdul Kalam is published in this ezine.

On behalf of the readers of PR-e-Sense, we welcome PRince into our midst. He will represent the new generation communication professionals globally. The Editorial Team thanks Mr Triambak Sharma for creating this new cartoon character. In the picture above, Dr Abdul Kalam is seen signing on the cartoon. K. Srinivasan is holding the cartoon folder.

– Editorial Team

Source: <http://www.primepointfoundation.org/presense/presense0708.pdf>



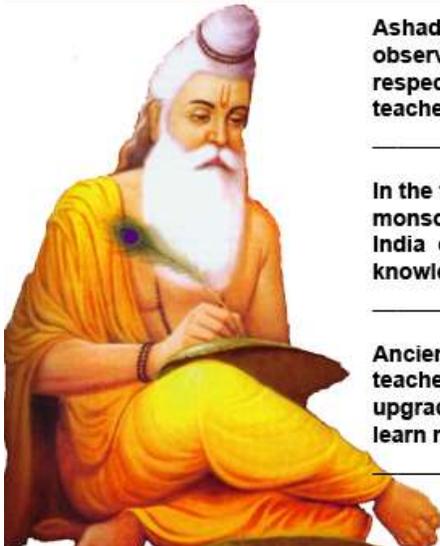
Ancient Indian Wisdom

Significance of Guru Poornima

Guru Poornima is celebrated all over India on the *Ashadha* full moon day (July–August) every year, to pay obeisance to teachers. On this day, people pay respect to the *Gurus* (teachers) and also remember and pay homage to *Veda Vyasa*, who compiled the four *Vedas*, the 18 *Puranas* and authored the Hindu epic, *Mahabharata*. Followers of Buddhism also celebrate this day by paying homage to Lord Buddha.

It is interesting to note that the people of ancient India not just remembered the *Gurus* on this day, but allowed an opportunity to the *Gurus* to enrich and update their knowledge during the four-month period following *Guru Poornima*, more popularly known as '*Chatur Masya*'.

Guru Poornima



Ashada Poornima day every year is observed as 'Guru Poornima' to pay respects to Veda Vyasa and other teachers.

In the following four months of monsoon session, Gurus in ancient India enhanced and updated their knowledge.

Ancient India gave importance to teachers and to knowledge upgradation. Modern India needs to learn much from its ancestors

Origin of Guru – 'Gravity' Derived from Sanskrit

The word, *Guru* is derived from Sanskrit, meaning 'to attract' or 'to draw'. This word also shares the root from the word, *Gurutuva*, which means 'gravity' or the force of attraction of somebody. It is interesting to note that the English word, 'gravity' has a Sanskrit root. A *Guru* attracts people with his radiant knowledge and inspiring words of wisdom. Ancient India remembered and paid respect to the *Guru* on *Guru Poornima* day for this reason. During the ancient days, *Gurus* used to travel across the country sharing

and imparting their knowledge.

The monsoon too starts during this period in India. During the ensuing four-month monsoon season, *Gurus* would remain in one place and impart knowledge to students. They would also make use of this period known as '*Chaturmasya*' to update and enhance their knowledge. In the later years, this four-month period reduced to 2 months (4 *pakshas*). A *paksha* is a 14-day period between a full moon and a new moon. The modern Human Resources experts talk about and emphasise the importance of the 'upgradation of knowledge' when this was practised in India for more than 5000 years.

Ancient India gave importance to teachers and to knowledge upgradation. Modern India needs to learn much from its ancestors.

Compiled by Sukruti Vadula, with inputs from D.K.Hari and D.K.Hema Hari, Founders, Bharath Gyan. www.bharathgyan.com



PRince

By- TRIAMBAK SHARMA



www.cartoonwatchindia.com, cartoonwatch@gmail.com



SIR ! WE CAN GIVE YOU **WINDOW SEAT..**
 WE REQUEST YOU TO KEEP EYE ON IT..
 INFORM US IF YOU FIND ANY
MISSILE ACTIVITY OUTSIDE...



Ignited Minds

Low cost Housing for India – Pioneered by IIT Madras



GFRG demo building constructed at IIT Madras

In India, there is a perennial need and commitment to address the shelter needs, especially of the lower income groups and their aspirations. The challenge is to meet these aspirations with an affordable solution. Ideally, the solution should be scalable – to reach the masses – and should be quickly built, and at the same time should address issues of sustainability and quality. We need a 'game changer' in the housing industry.

A technology proposed and developed by IIT Madras in this area of demand, was recently demonstrated with the construction of the 'GFRG Demo Building', which has the potential to meet this challenge of providing rapid, affordable mass housing. This demo building, comprising four flats on two floors, was built within a month at a finished cost of Rs 1250 per sq. ft. (including excellent finishes), as against the conventional building cost of Rs.1800 to Rs.2000/- per sq. ft. If done on a large scale, the cost of housing using the new technology could reduce further to as low as Rs.1000 per sq. ft.

Process

The main component is Glass Fibre Reinforced Glass (GFRG), which is a new building panel product, made essentially of gypsum plaster, reinforced with glass fibre rovings. These



panels are 12m long, 3m high and 124mm thick with hollow cavities. This product was originally developed and used in Australia since 1990 by Rapidwall Building Systems. In Australia, several buildings have been built using the Rapidwall technology, where the panels were used only as walls, resisting gravity loads. The floors were made of conventional reinforced concrete slabs. In India, the panels are made from processed phosphogypsum (recycled industrial waste from the fertilizer industry). Currently, it is manufactured by Rashtriya Chemicals & Fertilizers (RCF), Mumbai and Fertilizers and Chemicals Travancore Ltd (FACT), Kochi. This product is suitable for rapid mass-scale building construction. GFRG is of particular relevance to India, where there is a tremendous need for cost-effective mass-scale and rapid housing, and where gypsum is abundantly available as an industrial by-product waste.



**Dr Bhaskar Ramamurthy (Director of IITM),
Dr Devdas Menon and Dr Prasad
(Professors behind this concept)
explaining the advantages to Editorial team
of PreSense**

The IIT Madras Research Group extended the application of this product for the entire building system – including floors, roofs, and staircases, thus significantly reducing the consumption of Reinforced Cement Concrete (RCC). The panels are propped on the regular foundation structure, reinforced by 8mm steel rods at regular interval.

The team also collaborated in the indigenous development of an excellent water-proofing material, which is essential for prolonged durability of the GFRG panels, especially in the case of roofs and toilets. The team had tested the sustainability of the panels, especially on roofs by filling the terrace areas of the Demo Building with water upto 9 inches. The terrace was kept drenched so, for a week. No leakages or virtual damages were observed.

Advantages

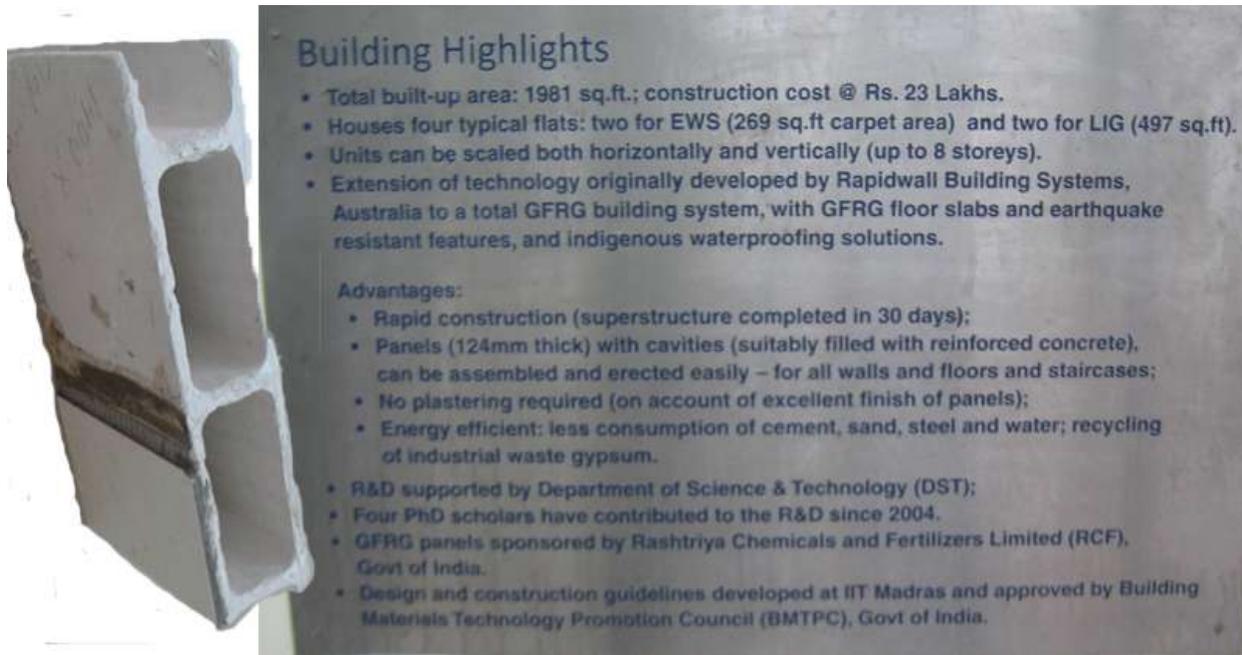
In India, more than fifty percent of our population lives in seismically prone areas of moderate to severe earthquakes. We therefore need to deal with earthquake resistant designs in building construction. The GFRG building system is designed to meet the requirements of the prevailing standards of seismic resistance. The IIT Madras Group conducted extensive studies on the use of these panels as structural members for earthquake resistant design, and a detailed design methodology has been developed.

The advantages of GFRG-based constructions over conventional buildings are as follows:

- ❖ High speed of construction: GFRG demo building with four flats in two storeys (total 1981 sq.ft.) was built within a month.
- ❖ Less built-up area for the same carpet area: wall panels are only 124mm thick.
- ❖ Less embodied energy and carbon footprint: significant reduction in use of cement, sand, steel and water; recycling of industrial waste gypsum. There is considerable reduction in the consumption of steel (less by 75%), sand (75%), labour (75%) and cement (50%). There is no need for brick work.



- ❖ Lower cost of structure: savings in materials; no plastering. Lower building weight (panels weigh only 43 kg/m²), contributing to savings in foundation and reduction in design for earthquake forces, particularly in multi-storeyed construction.
- ❖ Buildings up to 8-10 storeys can be designed using this load-bearing system, without the need for beams and columns.
- ❖ Excellent finishes of prefabricated GFRG panels – used for all the walls, floors and staircases, with minimal embedded concrete: no need for additional plastering.
- ❖ It is a green alternative as the components of gypsum and glass fibre are degradable into naturally benign elements.



It is commendable to note that the research work at IIT Madras has resulted in two PhD theses. Two PhD scholars are currently continuing the R&D efforts. The Department of Science and Technology, Government of India, had recently awarded a research grant of Rs 1.32 crores (Rs.13.2 million) to complete the research work and bring it to a stage of technology transfer. Present technology supports up to 10 floors from the ground floor. Now research is going on at IIT Madras for making the ground floor as a 'parking area' and to construct houses from the second floor. Ezine, PReSense and its Editorial Team and its readers congratulate the IIT Madras and its Research Team and for developing this pioneering technology for mass use in India.

Video presentation of the Demo building

IIT Madras shared a video describing the details of GFRG panelled construction. Incidentally, an Israeli builder who watched the video, has started on an 8-storey construction in Sri Lanka, using the technology. The video can be view in the link:

<http://www.youtube.com/watch?v=UUQEUCB7cMM> .

Interested may contact Prof. Prasad at IIT Madras through email prasadam@iitm.ac.in

By Susan Koshy, Editor with input from Prof. Devdas Menon and Prof. A. Meher Prasad, Department of Civil Engineering, IIT Madras



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