

## October 2012

### Dear Readers,

Recently, the two major questions emerging out of building construction in everyone's mind seem to be BIM & Revit. This article, we will try to get the salient features of both of them & in the process get a brief idea of their usage in the construction Industry.



Further wishing you a Happy Navratri, may this festive season fulfill all your wishes & desires.

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The Buzz...

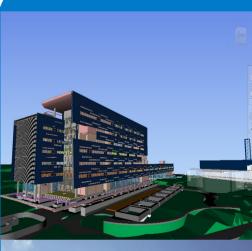
#### BIM facilitates......

BIM facilitates the trend and some developers are pushing towards 80% off-site manufacture of repeatable elements of specialist building types (schools, hospitals etc.).

Some designers may feel this limits "creativity", but signature architects worldwide are working with informed clients to achieve a good balance between design and optimized construction.

An outcome of this workshop would be a raised understanding of the possibilities and opportunities presented by innovation through BIM.









<u>www.excelize.com</u> is now more useful and friendly with interesting articles, newsletters, portfolio samples, testimonials and more.

# **Ongoing Projects at Excelize**

BIM - 5D implementation on an IT Park project in India

В	С	D	E	F G	Н
TASK	START DAT	FINISH DATE -	BASELINE STAF	BASELINE FINIS -	CONCRETE QUANTITY
ODC II	7-12-2011 8:00	11-9-2012 17:00	7-13-2011 8:00	10-20-2012 17:00	16813.3
SUB-STRUCTURE	7-12-2011 8:00	12-14-2011 17:00	7-13-2011 8:00	10-28-2011 17:00	7462.
JUNGLE CLEARANCE FOR SURVEY & SITE WORKS	7-12-2011 8:00	7-20-2011 17:00	7-13-2011 8:00	7-20-2011 17:00	
SURVEY & SETTING OUT LAYOUT	7-21-2011 8:00	7-25-2011 17:00	7-21-2011 8:00	7-25-2011 17:00	
CE -400 400 EL	0.0.2044.0.00	42.44.2044.47.00	7.20.2044.0.00	40 20 2044 47 00	7400
GF +106.400 EL	8-6-2011 8:00	12-14-2011 17:00			7462.
ZONE-1 C-F/1-8 (PT)	8-6-2011 8:00	12-14-2011 17:00	7-26-2011 8:00		2706.3
FDN PITS EXCV AND DRESSING	8-6-2011 8:00	9-19-2011 17:00			
PCC FOR FOOTINGS	8-6-2011 8:00	9-20-2011 17:00			282.9
F/R/P FOOTINGS	8-8-2011 8:00	9-25-2011 17:00	7-30-2011 8:00	8-20-2011 17:00	1923.9
COLS UPTO PLINTH BEAM	8-19-2011 8:00	9-27-2011 17:00	8-12-2011 8:00	8-23-2011 17:00	43.0
BACK FILLING I/C COMPACTION	9-26-2011 13:00	11-1-2011 17:00	8-22-2011 8:00	9-1-2011 17:00	
U/G PL&DR PIPES INSTLN INCL EXCV	10-27-2011 8:00	11-1-2011 17:00	8-27-2011 8:00	9-3-2011 17:00	
U/G DUCTS FOR MEP SERVICES INCL EXCV IF ANY	11-1-2011 17:00	11-1-2011 17:00	8-30-2011 8:00	9-5-2011 17:00	
TESTING OF MEP U/G SERVICES	11-1-2011 17:00	11-1-2011 17:00	9-6-2011 8:00	9-7-2011 17:00	
ANTITERMITE TREATMENT	10-26-2011 8:00	10-26-2011 8:00	9-8-2011 8:00	9-8-2011 17:00	
PCC/DEAD SHUTTERING FOR GF SLAB	10-11-2011 13:00	11-3-2011 17:00	9-9-2011 8:00	9-14-2011 17:00	
PT TENDONS/REINFORCEMENT WORKS	10-15-2011 9:36	11-3-2011 17:00	9-15-2011 8:00	9-19-2011 17:00	
SLAB REINF (TOP)	10-29-2011 8:00	11-3-2011 17:00	9-20-2011 8:00	9-22-2011 17:00	
POUR-1 GF SLAB F/R/P	11-2-2011 8:00	11-4-2011 17:00	9-23-2011 8:00	9-23-2011 17:00	448.3
POSTTENSIONING OF SLAB	11-17-2011 8:00	12-14-2011 17:00	10-3-2011 8:00	10-5-2011 17:00	
WALL					4.1
STAIRS					3.8
TOTAL QUANTITY					2706.3
DDC Cafetera Auditorium Training II 4					

Excelize has been working as a BIM consultant for this IT Giant in India on a couple of their IT park projects in the Eastern and Western and southern part of the country. The scope included 3D, 4D,5D and support in Facilities Management & as built. Currently this project is in construction stage and implementing BIM on this project has helped in many ways.

When the cost and material quantities are tied together to the 4D construction scheduling and sequencing, 5D of BIM is achieved. The quantities extracted from the BIM model were used to generate a materials management sheet. The Site team could extract the required material quantity for any given time frame in the project cycle. Implementing BIM 5D helped in minimizing the project waste and avoided material dumping on site and an exact quantity of material could be ordered prior to the execution. The lead time for the material/equipment required for the execution was reduced. 5D included extracting quantities from the BIM model and helping the site team to manage the material resources based upon the master project schedule.



## The Technology for you

And now it's your turn to innovate for cost cutting.

**Supertech** has invested Rs 200 Crore to set up a plant in Greater Noida to produce standardized pre-fabricated walls and slabs.

**Lodha Group** has started using blocks that are 15-20% lighter and reduce the use of steel and cement by 10-20% at its project in Dombivli

**Puravankara Projects** uses foam-based concrete to make internal wall, which brings in efficiency.

When margins in Realty has gone down by 50% and costs of Steel and Cement risen by 35-40% what remains is just 10-15%. Which is less than the bank interests on the investments.

It's the time every one has to check at each paisa spent. Let us see back who saves what?

- 1. Pre-fabrication 15 20%
- 2. Lighter blocks 2- 4%
- 3. Foam-based concrete 30-50% less in payload cost

**Required efforts**: For all these above innovations yes a great amount of investment and manpower are the key. Also another very import factor that goes in it is time.

There is a worldwide trend towards off-site construction and pre-fabrication, based on manufacturing and lean construction principles. On site construction is costly, wasteful and poses higher health and safety risks. It is too dependent on a consecutive workflow with little concurrent manufacturing and assembly, in controlled environments.

(data source: E



### **Upcoming Events**

**Coastal and Waterway Infrastructure Development Summit** 

**Date:** 11-OCT-12

Venue: Novotel, Juhu Beach, Mumbai, India

Inarch-Mumbai

Date: 18-OCT-12 to 21-OCT-12

Venue: MMRDA Exhibition Center, Mumbai

Architecture Building Construction Expo & Conferences

**Date:** 19-OCT-12 to 21-OCT-12 **Venue:** GLADA ground, Ludhiana



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