## doi:10.1038/nindia.2010.84; Published online 21 June 2010

## Feature

## Tech school buries history for posterity

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One of India's leading technology schools, the Indian Institute of Technology Kanpur (IITK) has devised a novel way of preserving the glorious history of its science — by burying it for posterity in a time capsule.

Sealed in gun-metal and buried deep in its campus premises are precious insights into the history of the institute, rare pictures, memorabilia, replicas of distinctions received by the institute and its vision for the next 50 years. There are lots of interesting nuggets too, such as, a listing of birds that fly around the campus today and the weekly menu of the students' hostel. The 285-kilogram capsule was descended into its earthy abode by the President of India in March, 2010. It is an 'intentional capsule', meaning it will be opened in future — 100 years later when the institute celebrates its 150th year of existence.

The time capsule, a term coined by George Edward Pendray, is a tool to pass information to future generations. It gained popularity in the West after the first one was made as early as in 1939. The concept is still new in India.



Indian President Pratibha Patil lowering the time capsule in the IIT premises. © IITK

A time capsule has an outer body of metal, generally steel or alloy, and it contains the desired information inside. Archaeologists, anthropologists and historians see it as an important tool to access information on the past.

IITK's time capsule differs from the conventional ones in that it uses gun-metal or red brass (an alloy of zinc, copper and tin) as opposed to stainless steel for the outer shell. "We used gun-metal owing to its corrosion resistance property", says Avinash Kumar Agarwal, Associate Professor of Mechanical Engineering at IITK, who oversaw the project primarily designed and executed by about 50 students of the institute.

Another novelty was the use of acid paper to store hard information. The cellulose in paper is prone to insect infestation when it comes in contact with water or oxygen. Wherever possibly, the team used a soft copy to minimise the involvement of paper. The team sealed the capsule in a nitrogen atmosphere to cut interaction with oxygen.

To overcome the conventional problem of data retrieval in capsules, the team placed external hardware, a 16 GB pen drive carrying all the documents in digital format and a notebook computer loaded with the required software and cables for future access.

The capsule has two parts — an internal cylinder 6 inches in diameter and 17 inches in length and an outer shell surrounding it. The shell is divided into three parts — all three cast and assembled over the inner cylinder after placing the content inside.

Deciding what to place inside the time capsule was tough. An internal committee took six months to finalise this. When it was lowered into the ground, it contained, among other things, oral record of the interviews, photographs collected over 50 years in digital format, annual reports, copy of statutes, ordinances and acts, student compilations for the history book, non-academic activities of students, institute blazer crest and flag. Nature India EISSN 1755-3180

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