

Isro’s navigation clock system to be expanded

Three atomic clocks in 6-satellite network have failed, forcing it to operate one clock with two on stand-by

CHENNAI

‘The clocks are ticking.’ Every morning this announcement brings relief and not tension to the Indian space agency team that is managing the navigation satellite system NavIC with only one rubidium atomic clock switched on instead of two in the six satellites.

The phrase signals that the atomic clocks — that provide locational data — in the six navigation satellites are functioning normally.

Three atomic clocks in the first navigation satellite IRNSS-1A have already failed.

“The clocks are ticking well. It’s not possible to share the technical details of mission management for important reasons. Isro is adopting various strategies so that best results are obtained from its satellite systems,” A.S. Kiran Kumar, chairman of the Indian Space Research Organisation (Isro), told IANS yesterday.

Sources close to Isro, on the condition of anonymity, told IANS that two more atomic clocks in the satellite system started showing abnormalities thereby taking the total number of failed clocks to five.

“Hence as a precaution and also to extend the operational life of satellites, the Isro is running the NavIC system with one clock switched on instead of two. If the running clock fails

then the standby clocks will be switched on,” sources said.

The initial plan was to keep two clocks in the satellite on and keeping the third on stand-by.

Simply put, the Indian Regional Navigation Satellite System (IRNSS) is similar to the GPS (Global Positioning System) of the US, Glonass of Russia, Galileo of Europe and China’s Beidou.

Each satellite has three clocks. The 27 clocks for the navigation satellite system (including standby satellites) were supplied by the same vendor.

The clocks are important to provide precise locational data.

“The clocks are working well. The signals are good. The replacement satellite for IRNSS-1A will be sent up this year. Already our system is giving precise data even in areas populated with dense buildings and forest areas,” said Tapan Misra, Director, Space Applications Centre, Isro.

According to him, the space sector is an unforgiving business and hence mission management is important.

Misra said it is not only the atomic clocks in the Indian satellite navigation systems that have failed, the clocks in the European system Galileo too have failed as per reports.

The Indian space agency has signed up with several universities in the country to measure the performance of NavIC system, said Misra.

The Rs14.2 billion (Dh810.11 million) Indian satellite navigation system NavIC consists of nine satellites — seven in orbit and two as substitutes.

— IANS



Nilima Pathak/Gulf News

■ Volunteers distribute butter milk to the poor under an initiative by Alag Natarajan, popularly known as the ‘Matka Man’.

Engineer finds his calling in quenching thirst of the poor

‘MATKA MAN’ MODIFIED HIS VAN TO FIT IN A WATER TANK CONTAINING FRESH DRINKING WATER

NEW DELHI

BY NILIMA PATHAK
Correspondent

Alag Natarajan, a man in his late 60s, is living up to his name. (Alag means ‘different’ in Hindi).

His day begins at 4.30am. But unlike most people his age, who head for a morning walk, Natarajan spends an hour-and-a-half filling more than 60 matkas (clay pots) that he has placed in several South Delhi colonies to quench the thirst of hundreds of people in the city’s soaring temperatures.

Popularly known as Matka Man, Natarajan told *Gulf News*, “I started this in a smaller way two years ago by placing a couple of pots on a stand in front of my residence in Panchsheel Park. I noticed a lot of passers-by, especially construction workers and cyclists, going to distant areas for work, stopping to drink water. Also, auto-rickshaw and taxi drivers would not only drink water, but also fill their bottles.”

Sensing that it was not enough, Natarajan decided to expand the idea to neighbouring colonies including Green Park, Hauz Khas and Chirag Delhi. But that not only required installing more matka stands, but also the equipment to fill them.

Natarajan, an engineer by profession, was set on a mission. He modified his van and placed a huge plastic water tank inside it. With the help of a pump and a generator he



Nilima Pathak/Gulf News

■ ‘Matka Man’ Alag Natarajan spends an hour-and-a-half daily filling more than 60 clay pots with drinking water.

filled the tanks. The van was then driven around filling all the pots with fresh drinking water at 15 locations.

Silent revolution

As Natarajan’s silent revolution began, it inspired others and people came forward to help. “Earlier, I started filling the tank with water from my own house. But during the summer months, the requirement was more and the pots needed around 2,000 litres of water daily.

“Luckily, authorities from a nearby school and two house-

holds offered support by allowing me to draw water from their premises. It has taken me three years to keep modifying the van and I had to import some equipment from the United States,” he said.

Though all activity is carried out and maintained primarily through the van, it is not always possible for Natarajan to do up four to five rounds of the colonies to ensure the matkas are always filled. For this, he has volunteers to help him.

“My household help and his wife are my support pillars. While the man doubles up as a

driver and caretaker of the van, his wife keeps a check and ensures the matkas are filled with water all day round. That apart, our gardener also assists with much of the work,” he adds.

The city’s roads are hard on bicycles. So, Natarajan has placed 100 cycle pumps at all the 15 matka stands and other stand-alone strategic locations.

Bells for poor cyclists

This gives poor people the flexibility to inflate their tyres at any time of the day and night. He also installs bells for cyclists who cannot afford to spend Rs50 to Rs70 (Dh2.85 to Dh4) to buy one.

“A number of cyclists and pedestrians die on Delhi roads. I am not saying it will help in saving their lives, but it can at least give them some chance,” he said.

Along with his team, Natarajan visits a few designated points, such as the Panchsheel Club, where he stops cyclists, labourers and the poor for refreshments. They are offered lassi (butter milk) and seasonal fruit and vegetables including cucumber, watermelon and radish.

“I am neither backed by an NGO, nor am I a government-sponsored organisation. All this work is self-funded through my pension and life savings. I do get a few donations and lot of family support,” he says.

Natarajan’s philanthropic journey began few years ago. He started by offering food to the homeless in Chandni Chowk area and carrying out the cremation of destitute and giving them a dignified end.

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Teen to serve water to lawyers for rape attempt

Another juvenile court had asked a child rapist earlier to clean floors of a Hindu temple in Patna

PATNA

BY LATA RANI
Correspondent

A juvenile court in Bihar has ordered a teenager to serve water to lawyers for a month as punishment for trying to rape a little girl a year ago.

The attempted rape occurred in Panhar village, Nalanda district, some 80km south of Patna, in January 2016.

The court handed down its verdict on Thursday after the 17-year-old accused confessed to the crime. It also took into account his age.

The teenager will be required to serve water to lawyers and all visitors coming to the lawyers’ association building in Nalanda, the home district of Bihar Chief Minister

Nitish Kumar, for a full month to atone for his crime.

“The court took a lenient view considering the age of the accused and gave him an opportunity to correct himself,” prosecution lawyer Ram Narayan Paswas was quoted as saying yesterday.

According to the police, the accused had lured the little girl to his home on the pretext of showing her pictures on his mobile phone. He then tried to rape her but her par-

ents rushed to her rescue upon hearing her screams.

Earlier, another juvenile court ruled that a child rapist would clean the floors of a Hindu temple in Patna for six months to atone for his crime.

In another case, a juvenile court in January directed that a delinquent teach Dalit children and serve patients at a government hospital for six months as punishment for getting involved in the illegal trade of alcohol.