

As we know BSNL has very large fiber and transmission network. For this, we are using multiple types of equipment like HUWAI, TEJAS, and SIEMENS etc. In these, TEJAS's STM16 system are used for creating Rings in order to connect multiple cities (NTR,WTR,ETR,STR) or within a city. In TEJAS systems the main control card (CPU card) is XCC card which is available in different versions like XCC04, XCC05, XCC06 etc. When this card becomes faulty than problems that are likely to be faced are as below

1. Loss of access to the system (Even not able to ping the system).
2. In case of fiber break than traffic doesn't switch over to another route.
3. XCC card not visible in system.
4. If primary card faulty than system doesn't switch over to secondary card.

This means that all types of redundancy will not work in these situations. **Previously BSNL had the support from Tejas Networks, thus the cards were required to be sent to Tejas Networks for repair. But currently, Tejas Networks is not providing the support and hence cards are not getting repaired. To get these card repaired from TEJA, quotation are very high upto Rs. 5000-7000 and still not ready to repair.**

**Example of cost saving for Gujarat Circle is given as below:**

- A. Considering the facts available in Gujarat circle (Total such cards faulty=150 Nos.)
- B. Repairing cost per card quoted by Tejas Networks=Rs. 6000/-
- C. Cost that may be saved by Gujarat Circle=  $A*B = 150*6000 = \text{Rs. } 9,00,000/-$
- D. Considering the similar situation in BSNL circles (25) and implying the method adopted, the cost that may be saved= $25*9,00,000 = \text{Rs. } 2,25,00,000/-$ .(i.e. Rs. 225 Lakhs for faulty card repair for one time)

After these all dependent situations, I had analyzed this issue and find the root cause of this problem and found that all problems is just because of software corruptions. This card is having a MicroSD card with pre-installed Linux OS which is provided by Tejas Networks. If we replace another OK MicroSD card with required software than problem will resolved. For this, I found freeware software which can create image from 'OK Working' MicroSD card and can write this image on another faulty MicroSD card and resolve the issue. By this trick we can resolve the corrupted OS problem and can save approximately more than Rs 2,25,00,000/-

**\*The procedure has been explained in-detail in document attached**

**As an evidence, the above steps have been successfully applied in around 20 to 25 faulty cards in Ahmedabad which were awaiting the repair from the vendor(Tejas Networks. This has enabled the restoration of not only the cards but the system for the fiber network as well. And there is huge saving of BSNL expenditure.**