

## Gallery 4.4.3: MOU with national knowledge network

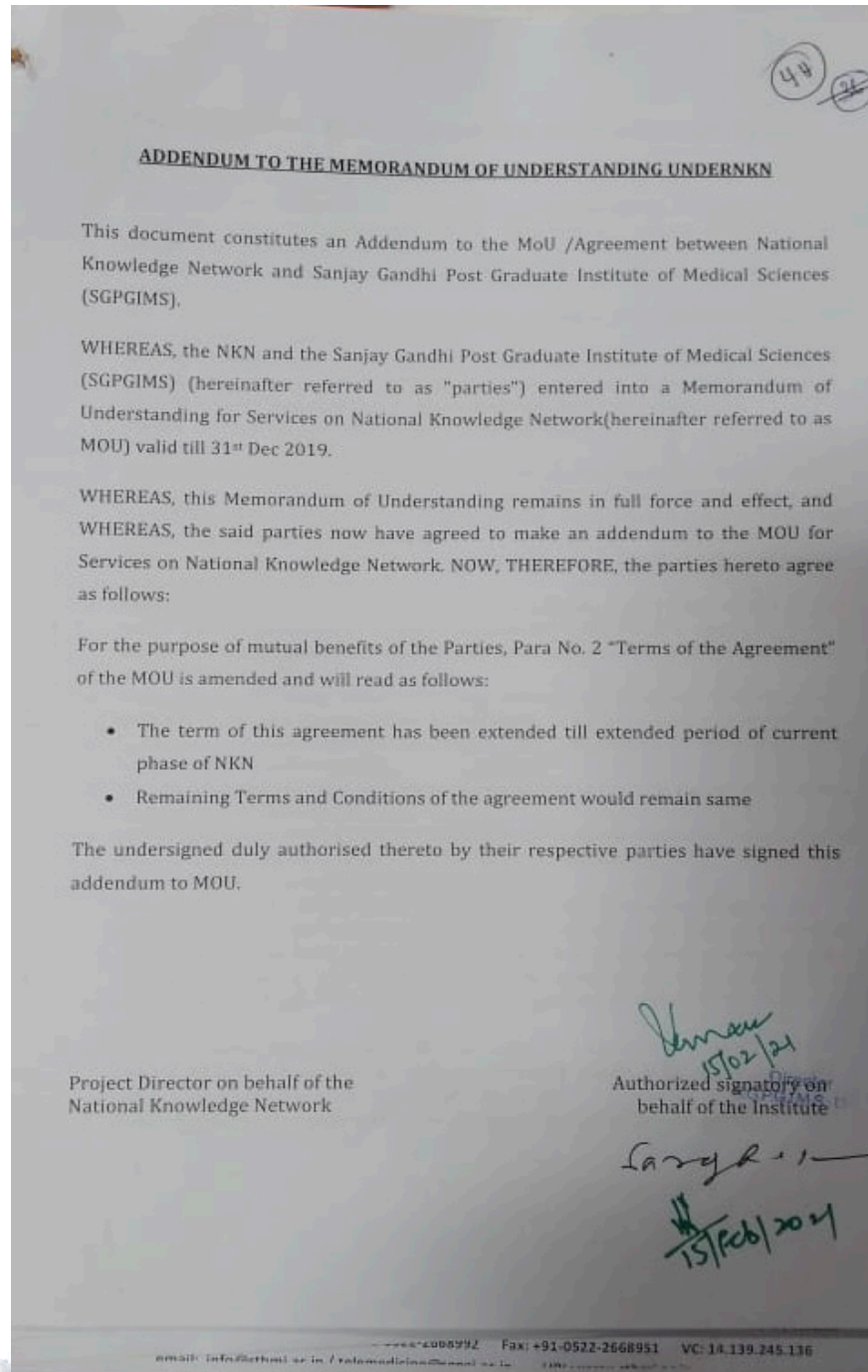


Figure 1: Memorandum of understanding between National Knowledge Network and SGPGIMS

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## Brief Background on Internet Bandwidth Instructure evolution at SGPGI

- At SGPGI, First internet connection was taken from Department of Telecommunication, Govt of India. It was through Radio Link.
- **2004**- Supply order was issued by SGPGI to M/s Sify Ltd for 512 KBPS (1:4) leased line internet connection in July 2004. The same was installed in September 2004. It had 64 kbps ISDN backup line. The backbone used was from BSNL.
- **2005** – SGPGI Up-gradated 512 Kbps line to 1 Mbps in September 2005 from the same internet service provider i.e. M/S Sify Ltd.
- **2008** – SGPGI issued Supply order to M/s Bharat Sanchar Nigam Limited (BSNL) for 2Mbps (1:4) leased line internet connection in July 2008.
- **2009**- SGPGI upgraded link from 2 Mbps to 10 Mbps (1:1) in November 2009 from the same ISP i.e. BSNL. Later on it was upgraded to 20 Mbps leased line (Managed leased line Circuit) by BSNL but it did not work properly. It was discontinued & Leased line of NKN is being used.
- SGPGI & Telemedicine both has separate 10 Mbps BSNL Leased Line costing approx. 13,00,000/- (Thirteen Lakhs) Per Annum.
- GRID GARUDA initiative is a collaboration of the Scientific, Engineering and Academic Community to carry-out research and experimentation on a nationwide grid of computational nodes, mass storage that aims to provide the distributed data and compute intensive High Performance Computing solutions for the 21st century.
- **2007** - Garuda grid middleware deployed at STBMI and connected to High Performance Computing (HPC) at CDAC Bangalore.
- **2009-2010** - Garuda started migrating to National Knowledge Network (NKN) in 2009-10 thus given 1 Gbps Last mile connectivity to SGPGI and Garuda link over NKN in priority.
- National Knowledge Commission recommended connectivity with Institute of Learning with high speed Internet.
- **2010** - National Knowledge Network (NKN) was implemented by National Informatics Center (NIC), New Delhi and is terminated in the Router installed in the Data Center of Telemedicine.
- Underground redundant Fiber cable was laid down to provide seamless internet services to the institute with 10 Gbps bandwidth.
- **2014-15** - MoU between National Knowledge Network (NKN) and Institute was signed (Agreement Registrar No. 186) (**Folio No. 35**)
- Clinical Telemedicine Practice over NKN migrated in the same year along with backup option of BSNL/ ISRO VSAT / Reliance Network & ISDN Lines for next few years.
- NKN was available to other cancer grid projects in which.
- **2016**- In January 2016, 10 Mbps BSNL Lease line at STBMI was disconnected. (**Folio No. 39**)
- **2018**- Reliance Jio Internet Connection was received under National Cancer Grid (NCG) Project by Dept. of Radiotherapy who is focal point to connect cancer hospitals in India and was terminated in Institute Router. It is active at Department of Radiotherapy and is used for Virtual sessions/meeting to connect cancer registry databases and Cancer Protocol Programs (**Folio No. 40-42**)
- Currently Institute and Telemedicine both are using NKN Bandwidth for Data Center, WiFi, Campus Network & eMail Services, Hospital Information System (HIS), eLearning Services at Library & Telemedicine Services etc. etc. (**Folio No. 36-38**)
- Ammendum to the Memorandum of Understanding Under Taken (**Folio No. 43-45**)

Figure 2: Memorandum of understanding between National Knowledge Network and SGPGIMS



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