

**GOVT. MEDICAL COLLEGE & HOSPITAL, SECTOR-32, CHANDIGARH**  
**DEPARTMENT OF PULMONARY MEDICINE**

Notice for procurement of Virtual Bronchoscopy Navigation System being 'Proprietary Article' under Rule 166 of GFR, 2017.

The Department of Pulmonary Medicine of this institution intends to purchase Virtual Bronchoscopy Navigation System having detailed specifications (Annexure I).

As per knowledge of Pulmonary Medicine Department, above said article/equipment is only manufactured by M/s Broncus Medical Inc., San Jose, California and the said firm sells the same or similar through its authorized agent/dealer M/s Biotronics Equipments Pvt. Ltd., Thane (W) Mumbai. The Proprietary certificate issued by the OEM is attached as Annexure-II.

In case, there is any other, OEM for the above said article, then they are requested to submit their proposal to the Director Principal, GMCH, Chandigarh through e-mail [dpgmch-chd@gmch.gov.in](mailto:dpgmch-chd@gmch.gov.in) / hard copy latest by 23/01/2021 failing which it will be presumed that there is no other firm who manufacture the required article/equipment and purchase will be processed and finalized from the available source.

  
**Dr. Varinder Saini**  
**Professor & Head**

  
**Dr. Deepak Aggarwal**  
**Professor**

  
**Dr. Mandeep Kaur Sodhi**  
**Assistant Professor**

## Specification of Virtual Bronchoscope Navigation System

1. A compact software based device providing a navigation system to assist the bronchoscopy operator to reach the target site in the lung. It should not require any type of sensors or applicators. It should be totally virtual.
2. The software should be able to analyse and generate a virtual image of the tracheobronchial tree based on the CT scan data which can be loaded into the system.
3. Facility for import (of CT data from disc or USB flash drive or PACS server) and analysis of CT data from commonly used CT image format platforms should be available.
4. The system should allow multi-planar reconstruction and 3D virtual visualization of the bronchial tree.
5. Should allow superimposition of the target on the virtual bronchoscopy images
6. Should provide distance and the airway measurements to enable localization of the target
7. Navigation accuracy should be 3 mm or less
8. Should allow real time guidance and line view for accurate negotiation in the airways
9. The visualization of the virtual bronchoscopy images should be on a high resolution screen
10. The system should be with following Software modules:  
Dicom Import, Airway segmentation, 3D airway tree, Airway centerline, Airway quantization, Airway labeling, Vessel segmentation, ROI definition, Path planning, Fiducial planning, 2D view, Luminal view Endoluminal view, CT video registration, Procedure plan, Scope calibration
11. Measurement functions provided by the Software should include distance to the target, distance to the end of the pathway, airway diameter, and sphere size. These functions are limited in accuracy by the resolution of the CT data. The resolution is based on voxel shape, which is the 3-dimensional equivalent of a pixel.
12. The Software should automatically extracts airways that are navigable in size, defined as  $\geq 3$  mm. Up to 3 pathways should be determined for each target. It should presents five (5) image windows including the virtual bronchoscopic animation, axial CT projection, coronal CT projection, sagittal CT projection and airway tree.
13. It should provide image views such as CT View, 3D airway view, 3D target View, Extraluminal View, Fluoro View, Fiducial Projection View, Virtual Bronchi Animation view
14. It should have facility to export the procedure plan as .zvc file.
15. The system should be able to run on a Windows or Mac PC based software platforms. It should provide both Planning and Procedure modules, installed on a desktop computer and mounted on a cart.
16. The system should be with following,
  - a. Processor: Dual Intel Xeon Processor E5-2680 v3 (12C HT, 30MB Cache, 2.5GHz Turbo)
  - b. Memory: 16GB (4x4GB) 2133MHz DDR4 RDIMM ECC
  - c. Keyboard: US English (QWERTY) Dell KB212-B QuietKey USB Keyboard Black
  - d. Video Card: Nvidia Quadro K2200 4GB (2 DP, DL-DVI-I) (1 DP to SL-DVI adapter)
  - e. Hard Drive: 2.5 inch 1.2TB SAS 10k RPM Enterprise HDD
  - f. Storage: 500GB SATA 3.0Gb/s 7200RPM / 8MB DataBurst Cache Hard Drive 5.25" DVD+/-RW Drive
  - g. USB: 3USB 1.1/2.0
  - h. Speed: 667MHz fully buffered DIMM ECC
  - i. RAM Memory: 8GB RAM
17. Facility of transfer of the image or video formats to a USB or a CD should be available
18. All necessary accessories to make the unit fully functional should be provided and quoted in the tender.
19. A color LaserJet printer, UPS, 2 TB hard disc drive should be provided
20. Battery backup for at-least 30 minutes.

### Terms and conditions

1. Demonstration of the equipment at GMCH will be given by bidder.
2. 5 years comprehensive warranty after installation.
3. CAMC for 5 years after the completion of 5 year warranty of the equipment should be provided.

4. The system should be USFDA/BIS/CE Europe approved.

**Certified that the above said specifications are not tailor made.**



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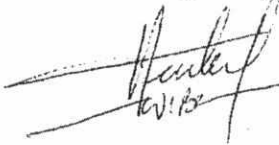
# BRONCUS

## PROPRIETARY CERTIFICATE

This is to certify that Virtual Bronchoscopy Navigation System (VBN System), Model **LungPoint Software**, manufactured by our company, Broncus Medical, Inc., is a proprietary image guided bronchoscopy navigation and planning system using CT images. A navigation path is displayed on a 3D reconstruction of a CT scan. No electromagnetic, consumables or applicators are required to use the LungPoint Software.

We, Broncus Medical, Inc., claim that no other company manufactures & supplies this system. Hence, it is the proprietary product of Broncus Medical, Inc.

Authorized signatory



Henry Wibowo

President & CTO

