A New AUBMC Imaging system – developed in house - installed in Operating Rooms

The Medical Engineering Department has recently installed one standalone - in house developed - “AUBMC” imaging system in the Operating Rooms.

In summer 2010, the Medical IT Unit was created (headed by Mr. Gaby Andraos) under the Medical Engineering Department (directed by Mr. Bassam Tabbouri). Later, in October, Mr. Mohammad Zaghal joined this unit and helped in developing the application as requested by the OR surgeons. A few months ago, Ms. Zeinab Dergham also joined the Medical IT unit and this project.

This imaging system was first developed by Medical Engineering (namely Mr. Gaby Andraos) for Endoscopy Department early 2005. In 2010, the OR Imaging System by Karl TOFOT Germany which was quoted for AUBMC – big more than 370,000 USD per one operating room (more than a total of 3.7 M USD for 10 rooms). Consequently, the Medical Engineering Department staff worked on developing a similar application to OR and added more functionality to it as recommended by our surgery departments. The cost of our in-house developed system and the advertised hardware for 10 rooms almost the same cost as one OR system from Karl Storz. Using the latest technologies to provide a high quality/high definition results, the development of this imaging system took us around one year of work.

The major functions of the “AUBMC Imaging” are:

- Videos recording for operations and enable video editing
- Report and Multimedia generation
- Have full control over all OR equipment including lighting, Door Access, climate control, Video switching
- Live Video Streaming over the AUB Network (Medical Students PC, Conference rooms and Hall)
- Video Conferencing

Currently the first three parts are being used while the other three are ready but pending for the connecting cables to be laid out by Plant Engineering. This project could not be successful without the help of Mr. Wael Shalhoub of Plant Engineering who put much efforts and time from his experience in Video Switching and Conferencing, and Mr. Joe Max-Wakim of CNS-MC who also helped in all computer/IT related issues.

The Medical IT – Medical Engineering Department is also working hard to make this system available not only to OR but to any AUBMC clinical department; this will help in reducing AUBMC capital budget expenditures. As such, the same system has already been installed in Endoscopy and Radiation Oncology. However, it can be easily used in ENT clinics, GYN, Vascular, Cardiology, Gastroenterology, Orthopedics.

The main functions of the Medical IT unit are:

1. Programming to support the Medical Engineering internal functions
2. Handle Medical Equipment database
3. Software and Hardware interfaces with medical devices
4. Attend to Medical Data backup issues specially to Medical Equipment not linked to the Network
5. Handle Medical competency issues
6. Attend with the IT department to cyber security issues

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AUBMC’s Best Christmas Tree Competition – The Detailed Story

The moment the competition “Best Christmas Tree at AUBMC” was announced, we were overwhelmed with enthusiastic calls and feedback from employees all around AUBMC. Apparently all units were determined to win this competition and started decorating their Christmas trees accordingly. Some units relied on gorgeous designs, others on innovative and shining ideas, while some relied on tree size and others were confident about winning based on their unit’s high employee count. HRDMC adopted a strategy to offset the effect of high employee count by allowing each voter to choose two trees. By this voters had to choose another tree besides the typical expected vote of their own units.

HR employees toured AUBMC and took pictures of all AUBMC Christmas trees, and online voting was opened from December 16-20. In all, 57 Christmas trees entered the competition. The voting period witnessed many ‘campaigns’ and lobbying, and even some last minute tree modifications requests. At the end of the day, the results reflected AUBMC employees’ preferences where it was noted that many opted to prefer the not-so-typical tree designs (the purple color of the Pharmacy’s tree and the innovative human-tree of the Patient Affairs as an example).

The results were announced in a general gathering in SB101 and the HR team visited the winning units and took pictures with the employees there. 455 employees voted for their best two Christmas trees. The resulting 910 votes were distributed among the participating 57 Christmas trees at AUBMC. There was a tie between ranks 2 & 3 as well as ranks 7 & 8 as shown below:

<table>
<thead>
<tr>
<th>Christmas Tree at:</th>
<th>Total Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy</td>
<td>60</td>
</tr>
<tr>
<td>Patient Affairs</td>
<td>53</td>
</tr>
<tr>
<td>Mammography</td>
<td>51</td>
</tr>
<tr>
<td>Women’s Health</td>
<td>51</td>
</tr>
<tr>
<td>Radiology</td>
<td>50</td>
</tr>
<tr>
<td>S North</td>
<td>46</td>
</tr>
<tr>
<td>S South</td>
<td>34</td>
</tr>
<tr>
<td>CCCL Inpatient</td>
<td>34</td>
</tr>
<tr>
<td>Nursery</td>
<td>33</td>
</tr>
<tr>
<td>Hematology</td>
<td>30</td>
</tr>
</tbody>
</table>

Department in Focus
Pathology & Laboratory Medicine (PLM)

What do you know about PLM other than being the biggest AUBMC unit in terms of its number of employees?

Being the “reference laboratory for Lebanon and the neighboring countries” PLM boast a history of high international standards from the College of American Pathologists (CAP), Joint Commission International (JCI), achievements and affiliations. The scope of PLM services includes specimen collection, processing & storage, point of care testing, analytical testing, results reporting, referral Labs testing, quality assurance and patient safety, compliance with accreditation standards, and campaigning for blood donation awareness, academic training & staff continuing education.

PLM is basically comprised of two divisions:
• Anatomic Pathology and Cytology
• Clinical Pathology

Units & sections included are:
• Administration
• Clinical Microbiology including Bacteriology, Immunology, Parasitology, Mycology and Mycobacteriology
• Transfusion Medicine/Blood Bank
• Clinical Chemistry
• Cytogenetics
• Clinical Hematology including Flow Cytometry
• Molecular Lab.
• Morgue
• Patient Specimen Collection and Specimen Receiving and Acquisition
• Surgical Pathology Including Neuromuscular Services
• Cytology

Its 120+ employees are responsible for performing more than 125,000 tests monthly (2011 figures – a 44% increase from 2007 figures)

Installation of Pneumatic Tube Transport system at AUBMC

A Pneumatic Tube Transport system has been installed and was put into use at AUBMC (end of 2011). The new system connects both the Emergency Unit and the outpatient receiving area both at the ground floor with the main Laboratory Receiving area at the third floor.

Nearly all patients’ samples can be used in this system. Tube, containers, kits and swabs can be put into a special capsule. The capsule is then inserted into the pneumatic tube, and when the employee presses “Send”, the capsule will be "pushed" and finds its way to the other terminal where the receiving area personnel empties it and sends it to its destination for testing. This will significantly decrease the turn around time of results and will eliminate part of the delays used to be associated with the old way of batching samples to be transported to the laboratory by the clerical staff.

The Pneumatic tube will be essential in ER where results are needed ASAP for most of the cases received.

Moreover, the Pathology and Laboratory Medicine already installed the new Queuing system at the outpatient receiving area to facilitate and enhance patients experience during their blood collection visits. Customers are now familiar with the automated system and are finding its standardized instructions pleasant and effective especially during peak time.