

## **FACILITIES PLANNING COMMITTEE**

### **Annual Report (September 2006 – August 2007)**

#### Members:

Klaus Woelk (Chair)

S.N. Balakrishnan (resigned in February 2006), Ron Frank, John Gantner, Greg Hilmas, Bill Kehr, Pradeep Nambiath, Marvin Patton, Robert Stone, Dan Stutts

#### Topics:

(A) The committee reviewed and acknowledged the ongoing efforts of IT to equip all UMR classrooms with the necessary hardware to use personal response devices (clickers). By the end of the academic year 2006/2007 about 90% of all classrooms were clicker-ready. For the remaining classrooms, instructors who desire to use clickers will be handed receivers as a temporary solution. The committee will be monitoring, and requesting reports of, the IT department's progress with respect to classroom technology equipment.

It is suggested that a member of the IT department will be added as a permanent member to the Facilities Planning Committee. A change of the bylaws should be initiated accordingly.

(B) An accurate seat count for the existing classrooms is still missing (actual seating count not predicted seating) for all centrally administered classrooms. Many classrooms are in a rather desolate shape with respect to furnishing and maintenance.

(C) The committee received a formal referral from RP&A concerning electric power issues. According to the referral, Academic Council is seeking to establish a procedure to communicate electrical power issues (voltage drops, scheduled and unscheduled outages) directly to the faculty. This issue was raised because voltage variances can effect the operation of sensitive research and teaching instrumentation. Respective concerns range from instabilities of equipment to malfunctions or even hazards, such as reaching dangerously high temperatures when cooling or ventilation systems are affected. Lately, insufficient voltage (194 V instead of 208 V) was supplied from the new, leased transformer. The problem was fixed during a scheduled intentional power outage during Spring Break. A notification of this scheduled outage reached many faculty too late or not at all. Soon after the voltage was restored, Rolla Municipal Utilities (RMU) supplied the campus with low voltage because of power line construction in the vicinity of UMR. Again, faculty reported problems with research instrumentation and felt insufficiently informed. It was noted that, in purchasing the new transformers, UMR will ask for alternate bids that include tap changers that automatically manage high or low voltage condition. After the bids have come in, it will be determined if this feature is economical. Still, an effective notification procedure is needed when low-voltage or high-voltage conditions occur at  $\pm 4\%$  of nominal value (e.g., below 200 V or above 216 V for 208 V power lines). Since no effective monitoring procedure exists so far for the electrical power on campus, it was agreed that power plant operators should monitor voltage every two hours. Monitoring should be more frequent during voltage instabilities (low-voltage

or high-voltage conditions). RMU generally notifies UMR when they sense a low voltage conditions. The following definitions were discussed as being important with respect to faculty concerns:

- (a) Inconveniences = sensitive research instrumentation does not work as designed
- (b) Emergencies = instrumentation or parts thereof fail to work

Electrical power issues *must* be communicated to faculty before a point of emergency occurs but *should* be communicated before a point of inconvenience occurs. The goal of a notification procedure is to protect sensitive research and teaching instrumentation, ensure smooth and stable operation of said instrumentation, and provide for sufficient time to execute protective procedures in case of power droops and outages.

A procedure of notification was agreed upon:

- (a) Physical Facilities will be responsible for monitoring voltage during daytime hours. Regular monitoring period is 8:00 a.m. to 4:30 p.m.
- (b) Physical Facilities will immediately notify all faculty if electrical power instabilities are monitored.
- (c) Physical Facilities will further notify all faculty of scheduled power outages two week in advance or, in case of emergencies, as soon as possible.
- (d) Physical Facilities will receive access to a sufficient communication procedure (e.g., the all-faculty list server) for the purpose of e-mail notification of electrical power problems.

Respectfully submitted

Klaus Woelk (Chair)