As an early step in the initial assessment phase of the Virtual Image User Study (VIUS), the VIUS team held two faculty focus groups in June 2001 on the Penn State University Park campus. Participating in the focus groups were 16 Penn State faculty members. These individuals had been identified by deans, department heads, or librarians as likely “intense users” of images in their teaching, research, and/or service work. The focus groups were moderated by a member of the VIUS project team and audiotape.

The sixteen participants represented the following fields of study: agronomy, anthropology, art, art history, classics, forest resources, French, geography, horticulture, landscape architecture, meteorology, plant pathology, and visual arts.

Major Issues

For what purposes are these faculty members using images?
All of the participants described themselves as moderate to heavy users of images. Teaching is their main use – all use images in undergraduate and/or graduate classroom teaching. Several said they also use images heavily in other ways such as extension-type teaching, research, publications, and professional presentations.

In what format are they using images?
Primarily, these users are using analog (slide) images. Several individuals said that they have personal collections of 1,000 – 10,000 slides; one uses a departmental collection that contains 300,000 slides. However, one participant uses digital images almost exclusively; several others use both digital and analog formats, and/or are in the process of gradually converting to digital formats.

How quickly are these intense users “going digital?”
About half the participants are in the process of digitizing some of their analog images to use in PowerPoint or on the Web, but several mentioned the almost prohibitive overhead in either doing this themselves or in having someone else (such as a teaching assistant) scan and organize large collections. Also, several mentioned that they are comfortable working with physical collections of slides… they are able to find what they need, sort the contents of slide trays, change the contents of a lecture from one semester to the next, and so on. This may not be an ideal system, but it is one that for the most part they are comfortable with and that is workable.
How important are images to the work of the users? How important is image quality, in particular?
There are significant differences even among intense users in terms of why they use images and what they need. For example, for courses or extension work on identification of, say, fish or trees or art, images are practically of central importance. Many, high-resolution, precisely labeled, well-organized images are necessary for these purposes. The ability to enlarge details may be critical for some (but not all) of these applications. In other cases, images are used more as examples or lecture supplements (for example, in languages or humanities), and smaller, fast-loading, lower-resolution images are often desirable.

Copyright and related matters.
Copyright, fair use, and related matters surface near the top of the list of concerns for these users. More than half the users stress their uneasiness about basically every aspect of these matters. There are two distinctly different categories of main concerns.
1. There are concerns about using images from publications or external collections. Faculty participating in these focus groups have not been especially confident that they were conforming to fair use norms in the past, but they at least felt more comfortable showing a few analog images in a classroom presentation than they would in, say, posting them on a website. The participants note that what is or is not permissible seems fairly complicated and unclear to the typical faculty member. Just as one example: if someone ask for and receives permission to use an image in a course, does this mean he or she can put it on the web for World Campus or other uses?
2. There are also concerns about faculty rights to control the use of “their own” images. There is understandable ambiguity about who owns images that were created by an individual faculty member while on salary from the university. There are obvious intellectual property concerns too complicated to detail here about control, compensation, intellectual credit, and so on. Again, this whole area is complicated, unclear, and – the participants believe – outside the expertise of the typical faculty member. Just as one example, if a faculty member photographs a painting in a museum, who properly should claim the photograph as intellectual property?

What sort of catalog/search approach would work best?
This is a tough, important question. Participants discussed various possible approaches to searching such as concept-based word searches, image browsing (thumbnails), user-assigned indexes (e.g., what's a match: color? text? keyword? similarly grouped images?). Unfortunately, it is clear that the generic answer to “What do you need?” seems to be “All of the above.” Multiple uses and multiple populations suggest, for example, that both text-search and image-search approaches are needed. Even for a single type of use in a given field of study it may be difficult to be more specific. For example, one faculty member in a single architecture course might want to find the same photograph of a log cabin as an exemplar of colonial architecture, German building techniques, Central Pennsylvania history, log homes, and so on. The users recognize the importance of the search-strategy question for the VIUS project, but no simple solutions or even priorities are evident at this point.
What’s the relative importance of individual/departmental image collections to external sources (PSU libraries, other universities, museums, commercial sites)? At this point, gaining electronic access to external digitized collections does not appear to be the main priority for the participants. They are very clearly looking for help with their own or their departments’ image-management needs. This is where they see the most immediate gaps – that is, in university policies, assistance, and/or improvements in areas such as:

- curatorial help in organizing and labeling personal or departmental slide collections;
- converting slides to digital formats;
- copyright/fair use policies and practices;
- controlling access to images (e.g., people might be willing to share photos or slides but only if they could be sure of getting them back; they might be willing to share images but only with colleagues in their own department or college);
- relatively ease and flexibility in collection management is important;
- establishment of or guidance about standards (e.g., preferred file types, resolution, file size);
- support for the highly labor-intensive job of digitizing individual or departmental collections;
- campus technology (server size, speed, dependability; technology-friendly classrooms; some fairly poor quality equipment -- computer projectors, lighting, blinds -- even in so-called “technology classrooms”) that support image-intensive teaching;
- clarification of (and possible revision of) university policies that encourage or discourage external links for online courses.

What do others do? What are best practices? Where should PSU be heading?
Several participants indicated that they would be interested in attending and/or participating in continuing discussions of the general topic of image use with experts or colleagues.

**SELECTED EXAMPLES OF FOCUS GROUP PARTICIPANTS**

1. Classics. A classicist and computer junkie, uses images and sound heavily in one very large undergraduate course. Gradually moving from a slide format to a more tech-oriented presentation. Uses over 1,000 images, with audio.
2. Geography. Many geographers both use images and make images, especially in gif format (most of the other faculty interviewed who use digital images, use jpeg format). This individual uses, in his teaching, carousels of slides only. He changes them every semester, though, so keeping track of what is where becomes a bit of a challenge.
3. Visual arts. This faculty member uses both digital and slide technologies, and is very dependant on the uses of images in general. There are many issues that the university could provide better guidance and/or help in terms of file formats, technology support, and so forth.
4. Forest resources. A dendrologist uses slides in every lecture. He has 3,000-4,000 kodachromes, and probably uses 1,500 in a given semester. Like others, though, he is constantly changing the selection for a given course. The size of the collection, and his desire for ease of use and flexibility, are reasons he has not digitized. His student feedback suggests students do not like slick, digitized, PowerPoint presentations as much as a hands-on, more personal slide and lecture approach.

5. Anthropology. This individual is digitizing (with TA help) his collection of 5,000 slides now. He uses them in PowerPoint for teaching and professional presentations. They are mostly “his” slides along with some that he has appropriated from photos in books and so forth.

6. Meteorology. This professor uses all sorts of images (maps, diagrams, photographs…) in essentially all of his teaching. The images are almost all digitized except for a few stereoscopic slides. He uses images both in classroom and web presentations. He, like others, is very sensitive to intellectual property issues; he considers most of the slides he uses to be his own property.

7. Art history. This individual notes that in his discipline, all faculty naturally use images heavily in teaching. He also notes that because his department has a library of 300,000 traditional slides (and two curators), it has been basically infeasible to completely digitize so far. He also notes that in this case, faculty for the most part probably don’t consider slides to be “their own” and they all must use slides from various sources (although this often includes photographs they themselves have taken).