

- We have to distinguish two types of recording modes ...
 1. Streaming to host
 2. Recording to internal memory
- ...and three types of transfer
 - a) immediately
 - b) *during* record
 - c) *after* record

Obviously, 1.a) is the most common operation for our cameras. However, cameras like the *pco.dimax* support combinations of these options.

Thus, we need a way to map all these situations to our API.

Standard streaming mode

Synchronous

```
uca_cam_start_recording(cam);  
while (cond)  
    uca_cam_grab(cam, &buffer);  
uca_cam_stop_recording(cam);
```

Asynchronous

```
uca_cam_register_callback(cam, &callback, NULL);  
uca_cam_start_recording(cam);  
while (cond)  
    do_something_else();  
uca_cam_stop_recording(cam);
```

Streaming mode for recording cameras

```
/* Explicitly request automatic transfer */  
uca_cam_set_property(cam,  
    UCA_PROP_TRANSFER_AUTO, 1);  
  
/* Like before */  
uca_cam_start_recording(cam);  
while (cond)  
    uca_cam_grab(cam, &buffer);  
uca_cam_stop_recording(cam);
```

```
uca_cam_start_recording(cam);  
sleep(1);  
uca_cam_stop_recording(cam);  
  
/* Actually readout frames from camera */  
uca_cam_readout(cam);  
while (!err)  
    err = uca_cam_grab(cam, &buffer);
```