## A&M handicapped services aid students

## **By KIRSTEN DIETZ** Staff Writer

Rud

While most students don't hink twice about opening a door, drinking from a water fountain or taking notes in class, for some handicapped students these tasks re almost impossible. "It's hard for people to imag-

ne unless they've been in that osition," Dr. Charles Powell, oordinator of handicapped serves, says.

Angela Roebuck, who is confined to a wheelchair, says she must wait for someone to open oors for her, because there are w electric ones on campus. Powell says she also has prob-

ems reaching many elevator butons and water fountains.

"When you can reach the water fountains, you can't get your knees underneath them," Powell

Ray Olivas, who also is in a heelchair, says he hasn't enountered many problems on

campus. "I think for the most part it's real accessible," he says. Olivas did say, however, that

he and another handicapped stu-dent once missed a week and a half of a class in Francis Hall. Trancis Hall has no elevators, and he class was moved to an accessile building.

Belinda Johnson faces differnt problems.

Johnson is legally blind. She an see objects and colors but an't identify individual faces.

Johnson says she has a problem with equipment, such as computers, which are not adapted for the blind. She tapes all her class lectures and later transcribes them into braille.

On campus, Johnson says sometimes officials are careless about leaving manholes uncovered. She says several years ago another blind student fell into an uncovered manhole on the Quadrangle

Johnson says she also has problems identifying cement trash cans because they blend into the

surroundings. She says her biggest problem is other students distracting her guide dog. "All the students want to pet

her when she's working," she says. "That's my main problem because she's so friendly. She All three say they're treated well by other students.

Roebuck says, "It's a lot different than how you're treated on the street. They (other students) are really very friendly and, any-thing you need done, they're more than willing to help.

Olivas, who attended Texas A&M before he was injured three years ago, says he is not treated any differently because of his handicap.

"I think a person in a wheel-chair has to be a little more out-going to meet people," he says. Olivas says he felt a little intimidated returning to school six

months after his accident. "When I was first here, I never

noticed anyone in a chair," he says. "Now I notice everyone in chairs.' Roebuck also was nervous

when she first came to Texas A&M. "You don't really know how

people are going to accept you, you don't know what the student body's attitude is going to be," she

says. "But once I got here and got into it, it was no problem."

Both say their parents also were nervous when they went away to school.

Roebuck says, "I think all parents are. It's letting go of a child. But, when they're handicapped, it seems to enhance it."

The more severely hand-icapped, such as quadriplegics, face even more challenges. They must have an attendant to do everything for them, Powell says.

Besides helping students who are blind or in wheelchairs, the Office of Handicapped Services also helps those with learning disabilities, such as dyslexia.

Powell says it is hard to estimate the exact number of handicapped people on campus be-cause many do not come to his office for help.

The majority of the kids who are here day in and day out num-ber less than 35 people," Powell says

He says accessibility at A&M is not much of a problem because the campus is flat and has lots of

curb cuts. But, he says, "Obviously it could be better."

The office budgets about \$45,000 a year for curb cuts,

access ramps. But, Powell says, the office usually spends more. Powell examines all new Uni-

versity building plans to make sure they are accessible to wheelchairs, as required by a 1973 federal law. The office has tried to add ramps to buildings built before the law was passed, but some-times this is impossible. For in-

stance, he said some steps are too steep to put a ramp on. If a handicapped person has a class in a building that is not ac-cessible, the building is made physically accessible or the class is moved to another building.

'If there is a person who needs to be in a class, we do it," Powell says. "If it costs \$12,000 to build a ramp because a person needs to go into a building, we build a ramp.

The office also administers and proctors tests for the blind and learning disabled in the office.

"During finals we had as many as 13 people in here at a time," Powell says.

The office also helps the blind and learning disabled with their reading.

In particular, Powell says Alpha Phi Omega (APO), a service organization, reads lots of books onto tapes which then can be used by blind students.

The office also has a van thattransports disabled students around campus.

During student orientation, the office registers and counsels handicapped students.

"It's very important for the learning disabled and the people in chairs not to be overloaded because of their disability," Powell

He says the office uses many volunteers, and APO is its most reliable source. Members paint curb cuts, make tapes from books, tutor and give tests. Last year, the organization raised more than \$2,600 for the office. Also, some departments lend the office tools, to help repair wheelchairs.

"Really, what it amounts to is that whatever the needs are, is what we do - if we can do it." Powell says.

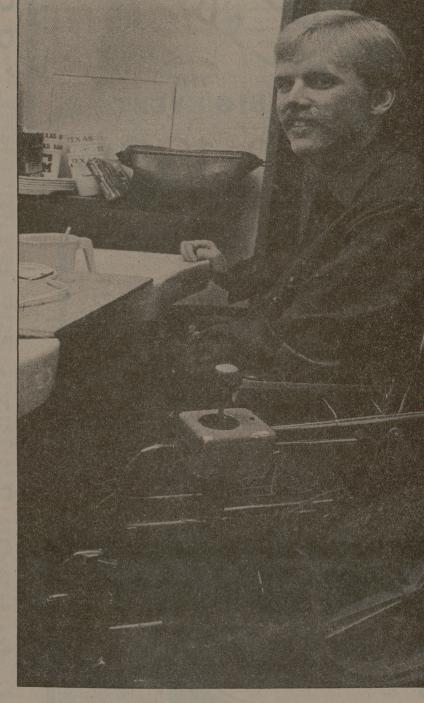


Photo by JOHN MAKELY

handicap-adapted bathroom facilities in Dunn Hall.

BECILS MANOR EAST MALL BRYAN POST OAK MALL COLLEGE STATION

## **Optical fiber** systems use increasing: AT&T official

## **By PAM COLEMAN** Reporter

Optical communications are here, and many companies are putting optical fiber systems in the ground as

fast as they can, a Bell Laboratories official said Monday. Dr. Kenneth A. Jackson, head of the Optical Material Research Department for AT&T Bell Laboratories, said new systems are going in all over the country.

Jackson spoke to about 75 profes-sors and students as part of the Rob-ert A. Welch Foundation lecture series. The foundation supports research in chemistry and physics.

A transmission system consists of a transmitter, a transmission medium and a receiver. In an optical transmission system, the transmitter

transmission system, the transmitter is usually a laser, the transmission medium is an optical fiber and the receiver is a photodetector. An optical fiber is a glass core sur-rounded by glass cladding that is covered by a protective jacket. Light is transmitted, through the fiber by curcersive internal reflections. The successive internal reflections. The glass is extremely strong and takes up less space than other systems.

Materials used in the production of the fibers must be pure, Jackson said. Using a method called modified chemical vapor deposition, the pure glass is formed into tubes, which are then collapsed into solid rods. The rods are drawn into fibers that are made into cables.

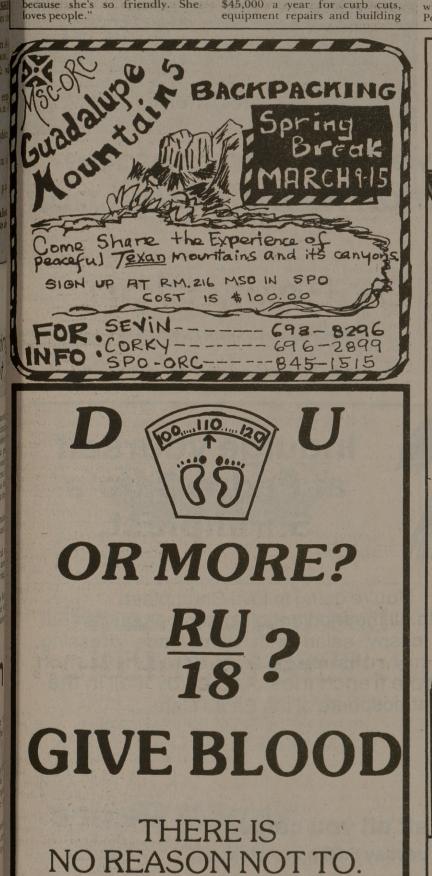
"About a dozen companies will be wiring up with optical fiber in the next few years," Jackson said. "I think AT&T is planning to put in 20 or 30,000 miles of fiber in the next two years.'

He said there is still a lot to be done in terms of the devices and production methods used in optical fiber systems.

"People are working very hard to make single mode high frequency lasers that will do long distance transmissions," Jackson said.

The optical fiber systems will in-crease the capacity of present communications systems.

DENIM



Jeff Scott, a junior marketing major, demonstrates the

