Telidon system is on television field trial

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The York project organizes course information from three areas: the Division of Executive Development in the Faculty of Administrative Studies, the Centre for Continuing Education, and Atkinson College.

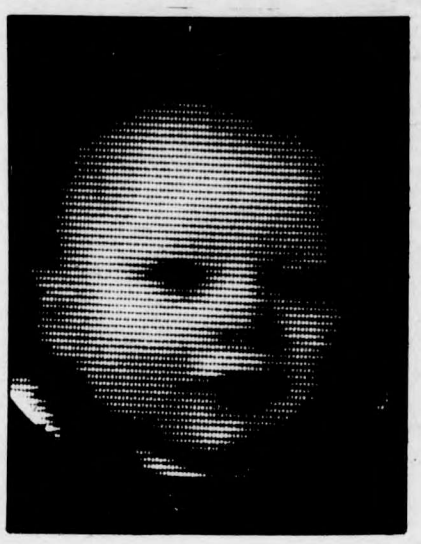
The Division of Executive Development, in the Donald B. McCaskill Centre at York, was chosen for entry into the Telidon system mainly because of the popularity and compactness of the program. Mainly concerned with management, the short courses offered are attractive to both middle and upper management personnel. The effectiveness of Telidon will be monitored through this program since respondents are requested to indicate that they received their information through the Telidon network.

The Centre for Continuing

Monitored usage

Education was chosen as it is also relatively small and easily organized. The experience gained with these smaller divisions will develop the skills needed for organizing the Atkinson College course information to fit the Telidon format.

The benefits arising from this project include exposure to a high technology medium, establishment in this new



communication network and experience in the new field of electronic publishing.

The field trial provides an opportunity for members of the York community to get some first-hand experience with the Telidon system. It even has interactive capability, i.e. games... "checkers, anyone?"

A Telidon videotex terminal supplied by TVOntario, is located in the Steacie Science Library. Students, faculty and staff may make arrangements for using the terminal (subject to the availability of the system). Individuals using the terminal will be asked to complete an evaluation form.

For reservations, contact Andrea Waldman, Room T103 Steacie Science Library, 667-6398.

High powered beams

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the power of the beam, one could either adjust the current or the pressure of the gases. An increase in the current, i.e., number of electrons per second, or an increase in the pressure of the gases would increase the intensity of the beam and thus, the temperature at the beam's focus. The opposite of these actions would result in a decrease of the beam's intensity. The nitrogen and helium gases serve as a catalyst to the reaction.

A variety of substances can be used as a lens. These range from sodium chloride (common salt) to the more refined materials such as cadmium telluride which is used in the Physics department. All of the lens must be transmissive to ten micron infrared light.

The list is endless

Some applications of the carbon dioxide lasers include drilling, cutting, spotwelding and cleaning. The list is almost endless, and continually growing as the knowledge of lasers increases. The remarkable fact about the laser is that it can be used to process both organic and inorganic materials. The same laser can be used to cut wood or to weld two pieces of metals together. This is possible because the laser melts the substance around the area where the beam is focussed. Historically, one of the first industrial applications of the high-power laser was in the drilling of fine holes in diamonds for the fabrication of diamond dies. Holes less than 0.5 mm diameter could be drilled, giving some indication of how precise the work of the laser is.

In welding, the two main advantages of the laser, over a conventional arc welding system, is the small heat-affected area and the ability to weld different types of materials. This was observed in 1969 when pieces of copper and titanium were welded together with a laser and an alloy of the two metals was discovered along the seam. In work where two materials require joining and must remain homogeneous, the laser's ability is unparalleled. The laser melts along the edges of both work surfaces, thus allowing for the liquid form of the material to intermix. The liquid then solidifies to form the homogeneous seal.

Just focus beam

The laser can also be used to work on materials that are under a vacuum, or in some other isolated environment, because no physical contact between the instrument and the work surface is required. The operator merely focusses the beam on the desired area and the work is done. Whereas, with a conventional system such as the arc welder, contact between the work surface and the welding rod is required.

Unfortunately, today's lasers do have their drawbacks. The high-power laser is a massive and delicate device, thus it must be handled with care, and it lacks the portability characteristic to other systems of equal power. Also, the laser requires a cooling system in order for it to operate safely. On the other hand, the advantages of laser machining often overcome such problems particularly in areas where conventional technology is lacking, such as in welding of aircraft alloys. This provides more than enough justification for the laser research to continue. York Physics Department is presently looking to the York Fund Campaign for the money to purchase a new, 2 kilowatt, carbon dioxide laser. The acquisition of this new instrument could result in a quantum jump in the University's present level of laser technology which is already of national calibre.