

NEWS from ARO-FE (November 15, 2000): NIRIM - Japan & Stanford University Working on a “Transparent Switching” Device

ARO-FE is presently supporting the work on crystal growth of periodically poled materials such as lithium niobate (LiNbO_3). This work is performed at the National Institute for Research Inorganic Materials (NIRIM) at Tsukuba, Japan.

NIRIM and Stanford University requested this support in their efforts to produce a “transparent switching” device which will significantly improve the data traffic capacity of optical networks at lower cost and better reliability. This device will allow different wavelengths to be dynamically switched while traversing the optical network resulting in a significant data traffic increase.



Specifically, “transparent switching” will

- eliminate converting switching from optics to electronics at each step;
- process the electronic signals; and then,
- re-convert and re-transmit the optical signals back into the network.

NIRIM and Stanford University are planning on:

- **Demonstrating** the underlying physical principles of operation and
- **Fabricating** the demonstration devices as a basis for future commercial development.

