IT has other uses too

The traditional scarecrow can't scare away birds any more, armed as it is with only rags and sticks. Now an Indian researcher has undertaken the task of making the scarecrow more tech savvy. Dr Manoj Jhade of the K.K.Wagh Institute of Engineering, Maharashtra, says that modern scarecrows will be solar operated and equipped with electron guns and micro-controllers to give them the technical edge to "iron out farmers' worries".

Many such innovations were discussed at a conference "Emerging application of Information Technology" held at Science City, Calcutta, on February 10 and 11. Organised by the Computer Society of India, the conference brought together technologists, application developers and researchers to exchange ideas on emerging information technology (IT) trends.

With miniaturisation a byword in computer technology, researchers have now taken the challenge to compress text. This is an outcome of the rapid growth of Indian Language Electronic Texts (ILET), said Dr Utpal Garain of the Indian Statistical Institute, Calcutta. There are four text-compression algorithms but "the best results are achieved by using a star encoding system". He explained that all the words of a language enumerated in a dictionary "Bengali was taken as the reference are divided into smaller parts. Words of the same length are sorted out and then replaced by stars to compress the text. Similar results were observed with other Indian languages.

From words and text, the next speaker moved on to images. Dr Steve Capell, an animation engineer working at the Dublin-based video games company Havok.com spoke about the future revolutions in this field. "Someday all video games will be based on simulation "a technology which makes animation more realistic "because it would be responsive to users."

The current technology uses pre-planned set ups designed by animators. However, the introduction of simulation would make the game more entertaining.

In addition to making images move, researchers were equally eager to discuss innovations in filtering images. Impulse noise degrades images when received by faulty sensors or because of errors in the broadcasting medium, said Dr Justin Vergheese of the Centre for Information and Technology. An effective innovation to filter corrupt images, he proposed, comprises two algorithms: one identifies the pixels (minute areas of uniform illumination of which an image on a screen is composed) and the other corrects the pixels.

The unprecedented complexity of computers in the workplace makes them very difficult for administrators to install, configure and maintain. Dr Rajarshi Das of IBM's T.J. Watson Research Center in the US spoke about a self-managing computer system to solve the problem. The key feature of the system would be self-monitoring machines with high-level human guidance.

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