Implementation of Touch Screen in Rural Development

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ABSTRACT: Portable electronic devices have been designed to perform a large variety of functions, including cellular phone, personal digital assistants (PDAs), video camcorders, digital cameras, and nootbook computers. All of these devices store information and perform tasks under direction of the user of the device, and therefore have a user interface.Many pen-based devices, such as personal digital assistants (PDAs), mobile phone-PDA hybrids, and ultra mobile personal computers (UMPCs) utilize sensing technologies that can track not only a stylus, but also touch input. This makes touch input an option when pen input is not possible, such as one-handed operation. However, some user interfaces often contain small dense targets.A finger Shift is a technique to tackle the problems with using finger touch. It offset the screen content to avoid ll three drawbacks of Offset Cursor then leads to significantly better performance. A touchscreen is an input device normally layered on the top of an electronic visual display of an information processing system. A user can give input or control the information processing system through simple or multi-touch gestures by touching the screen with a special stylus/pen and-or one or more fingers. Typically, a touch-screen display is electrically coupled to a computer. It generates images to be shown on the display.

I.   INTRODUCTION

Information Technology (IT) play major role in India.Touch screen is a development which has brought a great improvement in human computer interaction. A construction with touch screen which gives solution for the problems faced by farmers in agriculture; easy and interesting way to learn basics for primary level students; weather forecasting systems; maintaining an accurate record of patients in health care centres; interactive kisoks for public needs.These ideas may provide solutions to problems but does not hinder usability and uses already available devices. For the farmers to take decisions timely and reliable sources of information is required. User friendly systems, with content in local languages, can generate interest in the farmers. It is possible to create dedicated networks to make these services is available to all parts of the country.

THE DEVELOPING SCENARIO TOUCH SCREEN
A typical user interface includes a means for displaying information, a means for inputting information and operation control, and often a means for playing sounds and audio signals. As the size of these communication devices decreases and as the number of functions increase, it has become increasingly important for a user to be able to enter commands and information into the communication device in an efficient manner. Touch screens are more convenient than conventional computer screens because the user can directly point to an item of interest on the screen instead of having to use a mouse or other pointer. A touch screen allows the user of a terminal to enter a menu selection or data by placing a finger or other object at a location on the display screen that corresponds to the menu item, function or data numeral to be entered. The use of a touch screen input device that serves both as a display and as an input device for the communication device allows a larger display in that a large keypad is no longer required since many of the functions have been taken over by the use of the display screen as an input device. A user enters information and data by touching the display screen at specific points. A touch screen is a device placed over or above a display which provides a signal when the screen is mechanically touched. Touch screens are becoming more prevalent as data input interfaces as computers and other electronic devices become more ubiquitous.

fig 1:A touch screen

A software program is prepared for execution of the touch screen command of the computer user. The touch screen action of the computer user executes any desired actions for retrieving or displaying information on a display panel. The touch screen is made of transparent material. When it is placed over a video display device, images are visible through the touch screen.

II. A MODIFIED OPERATION USING TOUCH INSTEAD OF PEN

The goal of the user's finger and ambiguity about which part of the finger is called selection point. The proposed technique is called *Shift Technique.* When the user touches the screen, Shift creates a callout showing a copy of the occluded screen area and places it in a non-occluded location. The callout shows a pointer. It represents the selection point of the finger. By using the feedback, users guide the pointer into the target. The target is selected by moving their finger on the screen surface.By lifting the finger the target is committed. Unlike existing techniques, Shift is only invoked when necessary over large targets no callout is created. So users enjoy the full performance.

Shift's can overcome occlusion problems. It allows users to select small targets reliably. Shift conserve the speed and simplicity. By allow users to aim for the actual target, it remains compatible with regular pen and touch input. This compatibility keeps the interaction consistent. It is most importantly, makes it easy to deploy Shift in walk-up scenarios or to retrofit existing systems.

HEALTH SECTOR

A locally developed touchscreen computer system can help to guide staff in rural health centres through diagnosis and treatment procedures.In general healthcare workers provide a vital service but to maintain even a minimum standard it is essential that they follow a series of rigorous procedures when dealing with each individual patient.
Touchscreen clinical workstation (TCW).
◆ The TCWs are robust than desktop computers or laptops. They must withstand to any environments. It must be less reliant on mains electricity which is very important. The touchscreen system must also remove the need for external.
◆ When a patient visits a clinic equipped with the workstation, a nurse or medical assistant can quickly register the patient. The software programmed into the TCW ensures that no important details are overlooked. The data captured on the system during patient visits can also be used at the national level for policy making and analysis.

USAGE OF REMOTE SENSING IN RURAL AREAS
Remote sensing is the small or large-scale acquisition of information of an object or phenomenon, by the use of either recording or real-time sensing device(s) that are wireless, or not in physical or intimate contact with the object

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(An ISO 3297: 2007 Certified Organization)

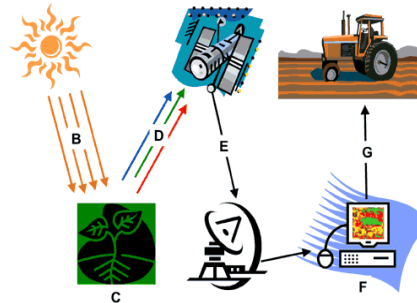**Vol. 3, Issue 6, June 2015**

Fig 3: Remote sensing

Remote sensing makes it possible to collect data on inaccessible areas. It collect and transmit data from different parts of the electromagnetic spectrum. Remotely sensed images taken from satellites and aircraft. It provide a means to assess field conditions without physically touching them from a point of view high above the field. Higher radiometric resolution allows a remote sensor to provide a more precise picture of a specific portion of the electromagnetic spectrum.

III. AGRICULTURAL SECTOR

1. Finding infected crops in a field
2. Locating places of water logging
3. Irregular plant populations

The information about various defects in the farm filed can be deduced through remote sensing. Images and pictures provides the sufficient details of the unwanted plant growth, insect infection can be spotted out. The informations must be updated automatically to the pc which is linked to the 'touch screen' located at farm field. According to the software program designed for execution of touch screen command, various spotted out irregulariteis can be put into visual representaion on a touch screen monitor.Updating frequently may keep the farmer with all details about condition of his farm land.

WEATHER STATION WITH PC LINK

All the weather data from the base station and weather history data with user adjustable measuring intervals can be recorded and uploaded to your PC.

A.REQUIREMENTS:

1.Base Station (Touch Screen LCD Display)
2.Transmitter & Thermal Sensor
3.Rain Sensor
4.Wind Speed Sensor
5.Wind Direction Sensor
6.Outdoor Mounting Kits
7.EasyWeather Software CD

Fig 6: Weather forecasting touch screen

Wheather alaram modes can be set up for Temperature; Humidity; Wind chill; Dew point; Rainfall; Wind speed; Air

pressure; Storm warning . Forecast icons may be based on changing barometric pressure.

UNEDUCATED WITH SIMPUTOR

Simputer or Simple Inexpensive Multilingual People's Computer could go a long way in taking computing within the reach of the common man in not just India but across the developing world.The Simputer is a low cost portable alternative to PCs, by which the benefits of IT can reach the common man. It has a special role in the third world because it ensures that illiteracy is no longer a barrier to handling a computer.

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◆ The Simputer looks like a large Palm handheld. It has a touch screen display and runs on three batteries so that it can be used in areas without reliable electricity.

◆ One of its most unusual features is the ability to talk back in local languages. Users who can't read Simply tap on icons on the screen and the Simputer explains out loud what each one is for. It is extremely user-friendly.

IV. CONCLUSION

Touch screen system is the technological breakthrough incorporated into our daily lives. All people are approaching to your organization. It will have access to total information within seconds, just with the help of this touch screen. Apart from the basic information related to the institution, lots of important information can be displayed on the Touch Screen System. Our Touch Screen Systems are very much useful for Computer illiterates coming from various rural areas to the Engineering College, they can easily register Online without having any computer knowledge and take lots of other important information about College, Admission procedure, Entrance examination & Fees, etc. through the Touch Screen System.Thus touch screen can cause a revolution to bring the tremendous changes in a village by implementing shift technique. By combining with other databases and packages touch screen has remained successful.

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