

Application areas of ICT

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THE whole world is now a village through the effective use of ICT. In most developing countries, access to ICT based information is very limited, but we will have to have tried to implement it in our country for our next generation.

There are three main types of ICT systems -- Information system that focuses on managing data and information, Control system a system that controls machines. It uses inputs, processes the input, and provides output. Third is the Communication system, which deals with transfer of data from one place to another.

Organising and processing the data of an organisation can provide useful information. These can be communicated for effective use and decision making.

Then, there is the question of information flow, access, storage, shared resources, and proper use of information in real time for decision-making. In order to provide information at a very high speed at any time and at any place, we need a communication network and media. These are internet, telephone, mobile phone, TV, radio and office automation systems such as word-processing, fax, audio conferencing, video conferencing, computer conferencing, multimedia, etc, through the use of networks of satellite and fiber optics.

The internet now enables broadcasts from radio and TV stations to be "time shifted" by the users, who watch or listen to the programs whenever they want to. Mobile phone, TV, broad-band internet access, and digital broadcasting can be used in the e-community centre. Information about cyclones, weather, health, business, education, and jobs should be provided from an e-community centre based on ICT. News services

Nowadays, in most of the technical/technological aspects we depend on foreign experts. They don't want to transfer the technology so easily. It should be the policy of government to implement modern ICT in all sectors by joint foreign collaboration so that our young people can be directly involved in technology. So, ICT education must be given from school level up to university level. We need different categories of skilled persons for implementing ICT in all sectors and for all people by 2020.



and the mass media are making themselves available so that people can access them when they want and wherever they are.

So, we will have to build information and knowledge based e-community centers using the above-mentioned technologies. The socio-economic conditions of many developing countries have been improving very quickly through application of modern ICT, and through the creation of various categories of skills in this field. Building information and knowledge based systems in all ministries and in the private sector of Bangladesh is essential for socio-economic development.

Hope that the caretaker government will take necessary steps to

implement ICT in different sectors to make a happy and prosperous country.

Data and information of different sectors in all ministries may be processed/stored/exchanged using e-government and e-governance based on ICT. Due to Cyclone Sidr many lives (of both people and domestic animals) were lost, along with damage to crops, houses, trees, and infrastructure in the south-east region of Bangladesh. The loss in lives would have been many times more if warning signals had not been received in time through ICT based systems.

Prime areas for implementation of ICT are education, health, agriculture, commerce and industry

and family planning. First priority should be given to the Election Commission for making acceptable voter list and holding national election based on ICT system.

One of the application areas of ICT is poverty elimination of the people in rural areas by providing necessary information about work, business, selling of goods, providing knowledge about prices and availability of daily necessary items for survival, health care, food, shelter, education etc.

Most of the farmers, fishermen and businessmen need to borrow money for improving their professional works. They need proper information of the organisations that can provide loans with low interest rate and less hassle.

In the agricultural sector, cultivators, women/housewives, and education workers in rural areas need proper information and guidelines about their works. It is possible to provide them information and training through an e-community centre.

It is not possible for poor people to access the information using modern communication technology due to lack of information and infrastructure available in rural areas. It is necessary to setup an e-community center in each village so that people can access various information and share global resources.

Many people in rural and urban areas are facing problems due to lack of proper information and guidelines about their daily essential activities and requirements of life. E-community centers can play a vital important role by providing reliable and fast information for the people in time and at any place.

Another major application of ICT based systems is outsourcing work. Many developed companies run their organisations by using people situated in different countries in the world with less payment. Many qualified persons in ICT field in Bangladesh can earn \$ 8/10 thousand per month, with a microcomputer and a broadband high-speed internet connection.

ICT based tele-centers have been set up in many developing countries in Asia and Africa. Nowadays, there is an information super-highway, and we need to link up with it from all parts of the country.

There is a plan to set up 40,000 telecenters, by 2011, for the poor and rural people to access necessary information in real time. One of the earliest attempts in Bangladesh to set up a tele-center was made by Grameen phone in October 1999. Cellular phone based information services pro-

vided by "mobile phone ladies," pioneered by Grameen Telecom, earned international recognition.

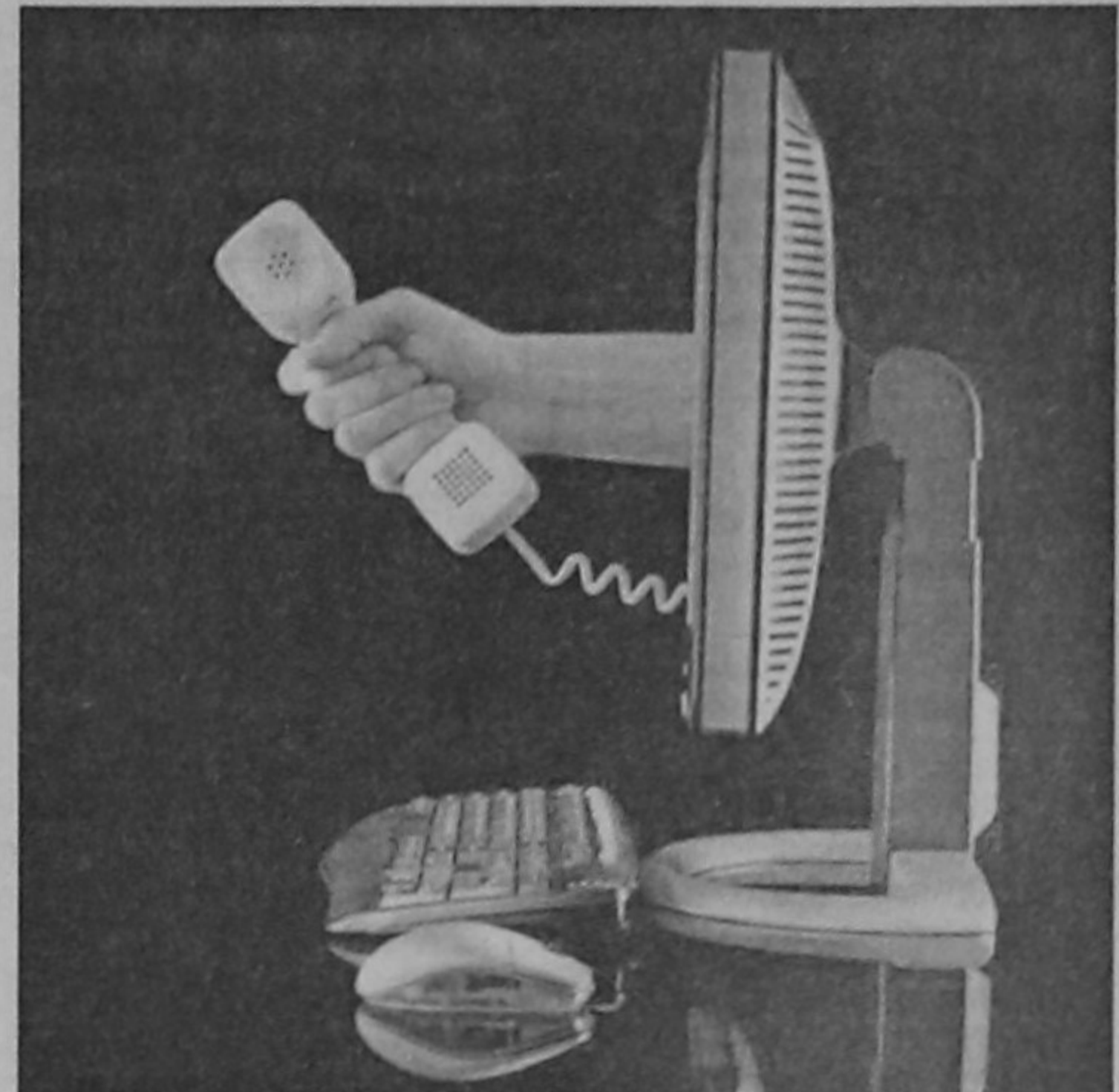
The government is planning to introduce e-government and e-governance through ICT. Nowadays, there are digital markets for on-line shopping. In our country, the major foreign exchange earners are the garments and textile sectors. We need to be more serious in building reliable information and knowledge based system to access information in these sectors.

I am pleased to know that government is making voter/national ID card, and people can use that card for many purposes. I wrote about the design and implementation tools and techniques of national ID card, voter list and voting system through the use of ICT in Ajker Kagoj on 12/02/2007 and 25/02/2007, and Jugantor on 25/02/2007. It is essential to set up ICT nationwide to get proper benefit of the national ID card.

If the government makes proper plan and policy to implement ICT based activities in the next five years then we will need nearly 10,000 ICT workers of all categories per year. So initiative taken by educational institutions to teach ICT depends on demand. We have come to know that India needs 50,000 ICT workers per year.

They have made a long term programme to train a huge number of people who would be able to implement ICT based activities in almost all sectors. India has been providing internet connection/ access to 40,000 schools from this year, with a view to train children on ICT.

Another important application area of ICT is on-line education system for aged people, housewives, people who did not have the opportunity of education in time, and people who want to build career in new fields. In that system students will attend on-



line virtual classes when they remain free. So, an on-line learning system needs to prepare lectures based on multimedia system. One teacher can teach a very large number of students on-line, and they can access lectures at any time from any place.

Examinations must be held on-line, and examinees will answer questions within a fixed time. This on-line system is very popular all over the world. GRE and TOEFL examinations are the best examples of on-line exam systems. All people appreciate this system, and real learners can be identified through an on-line exam system. Printing materials, lectures in CDs, and TV and radio are OK for distance learning, but without on-line exam systems it is difficult to examine the learners.

In order to develop, implement and efficiently use ICT based activities, proper skills and manpower must be produced to build information and knowledge based

system. Skilled workers are needed to set up a communication network and use the technology (both hardware and software), along with providing maintenance and servicing. Unfortunately, we don't have sufficient trained manpower to look after maintenance and servicing of the equipment/ machineries required for ICT.

Nowadays, in most of the technical/technological aspects we depend on foreign experts. They don't want to transfer the technology so easily. It should be the policy of government to implement modern ICT in all sectors by joint foreign collaboration so that our young people can be directly involved in technology.

So, ICT education must be given from school level up to university level. We need different categories of skilled persons for implementing ICT in all sectors and for all people by 2020.

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Tell the truth

The purpose of pointing out this historic record is not to further inflame passions that have erupted since Ms. Bhutto's assassination. It is to point out to Pakistan's arrogant establishment that its credibility problem is deeply rooted, and is of its own making. If they really want to set things right, forget about clever statements and smart TV interviews. Repair the damage by facing, and telling, the truth.

HUSAIN HAQQANI

ASKED by a journalist if he had "blood on his hands," General Pervez Musharraf said last week that it was "below my dignity," and his family background, beliefs and values were enough to prove that he was not involved in anyone's murder. He may well be right.

People should have turned against Al-Qaeda and the extremist militants after the assassination of Benazir Bhutto. But, instead, there was a wave of anger and rage against the government. No ruler should ever have to answer the question "whether he has blood on his hands."

The very fact that the question was even asked shows the depths to which the credibility of the present government has sunk. Pakistan's rulers need to focus on mending their relationship with the people of Pakistan.

There is no doubt that there were many lapses in the security arrangements for the slain popular opposition leader. The lapses that followed the assassination were even worse.

Scotland Yard sleuths have now been brought in to conduct an investigation, but forensic evidence that might have helped crack the mystery was washed out within hours of the incident.

Scotland Yard has had no major successes in resolving the numerous politically significant murder mysteries in Pakistan's chequered history. When Bhutto brought in Scotland Yard detectives to help with the Murtaza Bhutto murder in 1996, it was expected that the impartial investigation would bring to an end finger pointing and suspicion.

But Ms. Bhutto's government was dismissed in November 1996 and, the day after the dismissal, the Scotland Yard team was sent back to London without completing its inquiry or publishing a report. What could have been the purpose of shutting down the Scotland Yard probe except to keep alive allegations aimed at the destruction of the reputation of Mr. Asif Ali Zardari and splitting the Bhutto family?

This time, too, the forensic evidence has gone before Scotland Yard could investigate.

General Musharraf says that the decision to hose down the scene of the attack manifested "incompetence," resulting from a desire to keep the place clean.

The US Assistant Secretary of State, Richard Boucher, always eager to harmonise his words with those of Pakistan's ruling oligarchy, concurred. At a briefing for journalists he was asked if the government was not involved, why it washed away all the evidence. Mr. Boucher said: "I have no idea, but based on what I've heard from other incidents that seems to be standard practice, unfortunately."

A little research, however, shows that it is neither standard practice to immediately wash out the site of a terrorist act nor is the "incompetence" of the type seen in Karachi on October 18 (after the first attempt on Ms. Bhutto's life) or in Rawalpindi on December 27 after Ms. Bhutto's murder commonplace.

In fact, in all media reports tracked down by this columnist relating to earlier assassination attempts on high value Pakistani targets, it is clearly stated that the

police secured the area and collected DNA and other forensic evidence right after the attack.

A few days before the brutal assassination of Ms. Bhutto, former Interior Minister Aftab Sherpao was targeted by a suicide bomber during Eid prayers on December 21, 2007. Wire services reported: "The worshippers rushed dozens of injured to a hospital while police sealed off the area and began gathering evidence." Quite clearly, the authorities in Charsadda are more competent than the ones in Karachi and Rawalpindi where Ms. Bhutto was the target.

On July 31, 2004, Shaukat Aziz escaped an assassination attempt while on an election campaign. The suicide bomb attack was staged in Fatah Jang, a small town in northern Punjab, where he was contesting a by-election. At least six people, including Aziz's driver, were killed and 45 injured.

News reports at the time quoted a senior police official as saying that "Aziz was in the car which had just started moving slowly amid a tight security cordon when the car driven by suicide attacker detonated." One could only wonder where the "tight security cordon" disappeared when Ms. Bhutto faced her deadly attacker.

Other assassination attempts were directed at General Musharraf on December 14 and December 25, 2003, both in Rawalpindi. The fact that attackers could twice get so close to the heavily guarded leader raised serious concerns about Musharraf's security. "There has been a security lapse," said Information Minister Sheikh Rashid Ahmed. The attack sites were secured on both occasions. DNA evidence was recovered.

The purpose of pointing out this historic record is not to further inflame passions that have erupted since Ms. Bhutto's assassination. It is to point out to Pakistan's arrogant establishment that its credibility problem is deeply rooted, and is of its own making. If they really want to set things right, forget about clever statements and smart TV interviews. Repair the damage by facing, and telling, the truth.

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Foreign policy in the US presidential campaign

MOHAMMAD AMIAD HOSSAIN

THE campaigning for nomination began almost twenty months ago in the United States, but foreign policy did not feature prominently in the debates. The assassination of Benazir Bhutto on December 27, 2007, has sparked debate on foreign policy among the presidential hopefuls of both parties.

The democratic front-runner Senator Barack Obama, while commenting on the assassination, pointed a finger at the war in Iraq. The war in Iraq, Obama observed, diverted US resources from fighting terrorism in Afghanistan and Pakistan, both strongholds of Al-Qaeda. On the eve of his speech in Iowa, Obama spoke with American ambassador to Pakistan and Pakistan ambassador to the United States to find out the situation there, and urged upon the Pakistani ambassador to continue democratisation process in Pakistan.

Former Senator John Edwards, who is also contesting, has gone further than Obama by asking the Pakistan president to allow international investigation of the assassination of Bhutto for the reasons of transparency and credibility, while encouraging him to continue on the path to democratisation.

Instead of making clear her position on Pakistan, Senator Hillary Clinton spoke about her personal acquaintance with Benazir Bhutto, whom she met when she (Hillary) was first lady. Hillary paid tribute to Benazir by pointing to her commitment, her dedication and willingness to pick up the mantle of her father.

The Democratic contender, New Mexico Governor Bill Richardson, has criticised sharply the policy being pursued by President Bush vis-a-vis Pakistan. Bill Richardson said: "The president chose the dictator repeatedly and by doing so, he has let down both American and the Pakistan people." Bill Richardson, who served as US Ambassador to the United Nations (1997-1998) during Bill Clinton's administration, called for an immediate cut off of military aid to Pakistan that did not go directly to the fight against terrorism.

On the other hand, the Republican candidate Senator John McCain, Vietnam veteran, holds opposite views, and said that Musharraf "has done a pretty good job, done a lot of things that we

wanted him to do." McCain also rejected the notion of invading Waziristan, a safe haven for Al-Qaeda and Taliban elements. It represents an enormous military challenge, and it would alienate the people and government of Pakistan if we decided to initiate unilateral action, McCain commented (this point goes against Barack Obama who talked about an attack on the western part of Pakistan). Another Republican candidate Mike Huckabee, former Arkansas governor, is unique as far as foreign policy is concerned. He tried to capitalise on the turmoil in Pakistan after the assassination of Benazir and ended up his argument for building fence along US-Mexico border to stop more illegal Pakistanis coming across the border. This shows his lack of perception of foreign policy. Mitt Romney, former governor of Massachusetts, declared that there was no compulsion for gaining prior experience in foreign policy to be a presidential candidate, and gave the example of Ronald Reagan, who did not have experience of foreign relations, but succeeded in containing the influence of communist regimes during the Cold War era.

Actually, the issue of foreign policy first arose in the debate in Chicago in August, 2007. Presidential hopeful Barack Obama was criticised by other candidates when he proposed to attack Al-Qaeda in Pakistan. However, he struck back at his rivals who had supported the Iraq war, saying "they had engineered the biggest foreign policy disaster of our time."

The candidates expressed their desire to revise free trade deals, increase America's competitiveness with China, and invest more money in the infrastructure in light of collapse of Minnesota Bridge in August. With regard to a question whether China should be viewed as a friend or an adversary, most candidates said China was neither, but rather a competitor. Democrat candidate Bill Richardson took a hard stand against China, and said he would be tougher toward China with regard to human rights, trade and fooling around with its currency. On the question of scraping or fixing Nafta (North-America Free Trade Agreement) Hillary Clinton was of the opinion that Nafta and the way it has been implemented has hurt a lot of American workers.

Six Republicans and four

Democrats participated in two separate debates in New Hampshire on January 5, 2008. The exchange began a six way argument of the Republican candidates moderated by Charlie Gibson. In response to the question whether they supported Bush's policy of pre-emptive war, all but Congressman Ron Paul embraced the policy. Ron Paul was of the opinion that terrorism was sparked by US foreign policy. When other candidates wanted to refute Ron Paul's arguments, he angrily asked why terrorists did not attack Canada, Germany, Switzerland etc. Senator John McCain and Mitt Romney, former governor of Massachusetts, gave credit to President Bush for preventing another terrorist attack on US after September 9, 2001, while former Senator Fred Thomson defending the invasion of Iraq, said: "We are in a global war. We must do whatever is necessary to protect ourselves."

It was followed by a debate between Democrat presidential hopefuls. On foreign policy, Barack Obama stood by his earlier statement that as commander in chief (constitutionally president of the United States is the commander-in-chief) he would go into the western part of Pakistan if he had authentic intelligence about terrorists in the region. All candidates expressed concern about the fluid situation in Pakistan. Former Senator, Edwards, called the Pakistan president an unstable leader, while New Mexico Governor Bill Richardson said he would ask President Musharraf to step down. Senator Hillary Clinton disagreed. She was of the opinion that "if you remove Musharraf and have an election, its going to be very difficult for the United States to be able to control what will come next." This opinion reflects the position of the Bush administration. On the Iraq war, Edwards said he would pull out 40,000 to 50,000 troops very quickly from the war zone, while Richardson said he would withdraw all troops in one year. Senator Hillary Clinton said she would withdraw troops within sixty days. Physically, this proposition is not feasible. Planning, transportation and financing would take considerable time.

The question of nuclear weapons was raised by the moderator. Barack Obama was of the opinion that the nuclear non-proliferation treaty needed to be revised in the context of the present situation. We

need to persuade Russia to reduce nuclear weapons. Senator Hillary said that if nuclear weapons slipped into the hands of stateless terrorists, we have to find the people responsible for that. She also holds the opinion that Pakistan President Musharraf should share information about nuclear weapons with delegations from the United States and Great Britain. She did not suggest involving the International Atomic Energy Agency of the United Nations. None of the candidates suggest that Pakistan should be persuaded along with India to sign the nuclear non-proliferation treaty. These two Asian countries and Israel have not signed the treaty.

Of the top three Democrat presidential candidates, Hillary Clinton appears to be the least inclined towards any change in foreign policy. In a recent talk in BBC on the prospect for 2008, one of the editors of BBC told the panel that if Hillary Clinton won the presidential race, Bush's foreign policy would continue. On the Republican side, no candidate, except House Representative Ron Paul, has distanced himself from the policy being pursued by President Bush.

It is interesting to observe that the major issue of the stalled Middle East peace process did not receive attention in the debates on foreign policy. Without resolving the conflict between the Palestinians and Israel, there will no peace in the Middle East. President Bush has undertaken a trip to the Middle East countries on January 8 to push the peace efforts that had been initiated in Annapolis, US in November last year, and to counter any influence on the Gulf leaders following the visit of Iranian President last month.

Many other issues, like Bush's proposal of placing defense shield in Europe, Iran's uranium enrichment program, genocide in Darfur, and the controversial election in Kenya, were not placed before the presidential hopefuls in the debates. Only Barack Obama, who has roots in Kenya, took up the issue with the State Department to persuade the Kenyan leader for a solution and has spoken to opposition leader in Kenya, Raila Odinga, to find a negotiated, satisfactory solution to the volatile situation in Kenya.

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