Papers and Reports

industry has been especially sensitive to it: Hotels that are “just like home” or

4.1 Security

3.2 Location Coordinators

6.0

For the nomad, any place he hangs his hat is home, office, or

Mechanisms that bridge different systems for the nomad are

challenge is the dynamic coordination of communications

also present varied and changing quality of service. As nomads

phones, computers, building control systems, etc.). They may

Could a computer just print the message near him? When has

members, costs might be minimized through relocation of data

when nomadicity becomes a design consideration. Traditional

preference, dynamic environments, and technological change

distribution and synchronization are affected by user

his desk, how will the storage on the device be integrated with

There are solutions to these individual issues, including smart

A location coordinator knows the characteristics and

communications system capabilities at a given location as they

which, although used primarily by the communications system

system. If it is packaged so the user can get at it through the

is provided by someone other than the communications system

communications system is thought to be complicated because

Under some circumstances, the definition of the

organizations and constrained by geographic areas.

Security is broadly divided into

sites are examples of security domains.

available. As they have evolved, both these systems have

which, although used primarily by the communications system

which, although used primarily by the communications system

transaction opportunity.

In this section we explore some of the defining motivations,

difficult to balance a checkbook in the dentist's office or to order

Device independence --

to do where he wants to do it. It is the character of the nomad

transparently directing our communications to the appropriate

Public acceptance of new technology is

nomadicity is that individuals remain as connected as they

challenge the NII to adapt continuously to new technologies.

channels and static devices with individuals.

of physical attachment to a communications channel -- or

heart monitors) can be guaranteed to be in one-to-one

occasional proximity to them. The cellular phone will often move

Not only do nomads carry on their lives in many locations, they

Not only do nomads carry on their lives in many locations, they

functioning in the same way even though the vehicle is in

moving contexts:

Also move between the locations. One important class of

Also move between the locations. One important class of

Increased productivity --

Interactivity --

moving contexts:

Moving contexts:

As the location changes, there may be changes in capability.

Increasing the capabilities of the individual.

moving contexts:

Moving contexts:

connection dialog, one which takes the environments of the

environment must be partitioned so that the user can filter and

intruding on a family weekend. The communications

A location coordinator knows the characteristics and

communications system capabilities at a given location as they

which, although used primarily by the communications system

which, although used primarily by the communications system

By Leonard Kleinrock, Chairman of the Department of Computer

The Cross-Industry Working Team (XIWT) is pleased to provide

provide anytime, anywhere access. It is beginning to happen,

people on the move. It provides a vision to guide the evolution

The NII will facilitate connectivity

and integrating it into the rapid evolution of the NII

Public acceptance of new technology is

Public acceptance of new technology is

1.0 Introduction

most challenging are: 1) supporting the multiple roles desired by

communications, such as data transport, user authentication

Device independence --
	- device.

Increased productivity --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Interactivity --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,

Device independence --
	- increased productivity and efficiency, productivity gains,
	- increased productivity and efficiency, productivity gains,
v: Distributed Measurement

i: The Portable Office

PC Week (June 27, 1994) reports that, in 1996, of all personal computers shipped in the United States -- excluding servers and home use -- 77.1 percent were portable. According to PC Week, “The portable office is not just the 9-to-5, work-for-pay environment, but any place where a person assembles the tools and resources to get the job done.” The portable office is a critical component of the NII, as it supports the ability to access all services from different environments.


People will want access to all of these services from different devices and communications media -- the television, telephone, and post office. The NII must accommodate these delivery mechanisms for one-quarter of all new computers sold in the United States.

Dissemination of data originating in remote locations. An NII that cannot ignore the potential of devices as nomads. Distributed systems must enable people to interact. Knowing the user's capabilities, preferences, and location.

These are examples of applying preferences to the context. The context is a specialization of an information ecology. Your environment is not the external environment, but your social and intellectual environment. Your personal context is an example of individual preferences. Context identification can be either specified -- “I want to do this” -- or discovered -- “I am currently doing this.” To change your context, you need to reestablish the state of the context. Context identification and prioritization is not a single activity. It involves the continuous association of contexts and the prioritization of events.

● Prioritization of events.

● Interaction with the context.

● Supporting multiple contexts in the same application.

● Numerous examples of applying preferences.

● Prioritization and analysis. The situation at the site can be characterized by its context, which is a complex set of information, events, and relationships. The context of an individual is characterized by the sensors, data representation, and preferences associated with that individual. Sensors collect data from the world, data representations organize and interpret the data, and preferences determine how the data is used.

The challenge in software is similar to the system component of an information ecology. The distribution of function between applications and infrastructure must be the subject of systematic design. Clearly, the distribution of function between applications and infrastructure is a complex issue. It is not possible to determine the distribution of function between applications and infrastructure without considering the context of the user. The context of the user is characterized by the sensors, data representation, and preferences associated with that user.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.

There are issues of changing bandwidth, latency, or reliability. Many applications are designed to take into account only the availability of resources. They characterize them as either being fully available or fully unavailable. Issues of changing bandwidth, latency, or reliability are better coordinated than if the exchanges were handled by the application, as they are by the infrastructure. The infrastructure must be designed to support these exchanges.

The ability to deploy sensors rapidly to the environment is essential. Sensors floating in rivers, for example, can monitor the health of the ecosystem. The command center must be able to determine the health of the ecosystem. If the NII supports this use case, then the command center will be able to determine the health of the ecosystem.

Environmental monitoring -- the ability to deploy sensors rapidly to the environment is essential. Sensors floating in rivers, for example, can monitor the health of the ecosystem. The command center must be able to determine the health of the ecosystem. If the NII supports this use case, then the command center will be able to determine the health of the ecosystem.

The command center can determine the health of the ecosystem. If the NII supports this use case, then the command center will be able to determine the health of the ecosystem.

Emergency rooms are deployed. If the NII supports this use case, then the command center will be able to determine the health of the ecosystem.

The manufacturing process has many stages, including product planning, design, forecasting, and production. The management team is nomadic. The infrastructure that supports the nomadic management team is nomadic.

The challenge in software is similar to the system component of an information ecology. The distribution of function between applications and infrastructure must be the subject of systematic design. Clearly, the distribution of function between applications and infrastructure is a complex issue. It is not possible to determine the distribution of function between applications and infrastructure without considering the context of the user. The context of the user is characterized by the sensors, data representation, and preferences associated with that user.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.

Finally, individuals certainly will want to maintain some control over their context. They might want to control their context scope. People can be expected to have preferences for every aspect of their context.

These preferences will include the permissible demotions they can accept. Those preferences will include the permissible demotions they can accept. This context scope is an example of individual preferences. Context identification can be either specified -- “I want to do this” -- or discovered -- “I am currently doing this.” To change your context, you need to reestablish the state of the context. Context identification and prioritization is not a single activity. It involves the continuous association of contexts and the prioritization of events.

● Prioritization of events.

● Interaction with the context.

● Supporting multiple contexts in the same application.

● Numerous examples of applying preferences.

● Prioritization and analysis. The situation at the site can be characterized by its context, which is a complex set of information, events, and relationships. The context of an individual is characterized by the sensors, data representation, and preferences associated with that individual. Sensors collect data from the world, data representations organize and interpret the data, and preferences determine how the data is used.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.

Privacy and security. The NII will have to support multimedia applications. The NII must accommodate these delivery mechanisms. The need for widespread access, while providing some enhancement to existing models.