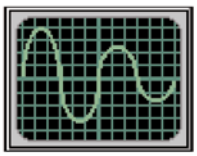
WHY THE UPS?

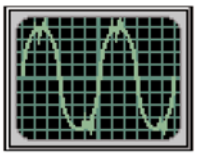
MGE UPS SYSTEMS

Power problems and their consequences

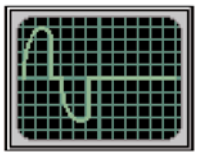
Power problems represent over 40% of the causes of lost data.
Supplying computers and their peripherals with AC power directly from the utility represents a risk; certain disturbances are inevitable.



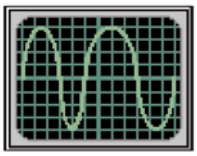
Voltage variations



Interface and harmonics



Outages



Frequency variations

- The consequences for users are often dramatic:
  - Data-processing errors;
  - Loss or damage of computer files;
  - Premature ageing of equipment;
  - Interrupted operation and loss of business.

- Characteristics of an electrical disturbance

  If an overvoltage is sufficiently high, it is instantly propagated on the power cables or on telephone lines, and can cause significant damage. It can reach the computer via the electrical distribution system and the power cord, or via network data lines. The first components to succumb are generally modems or mother boards. Then the microprocessors, which leads to loss of data. The distribution system reacts to overvoltages by disconnecting, which results in extended brownouts or blackouts. If the drop in voltage is serious enough or if a blackout occurs, the hard disk may be damaged and data lost. In all the above cases, any current work that has not been saved is instantly lost. In worst-case situations, the hard-disk password may be altered or the file-allocation table modified, in which case the hard disk can no longer be used.

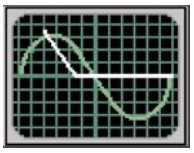
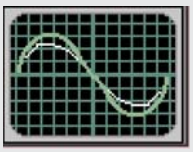
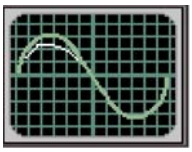
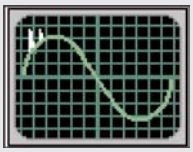
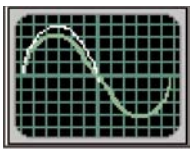
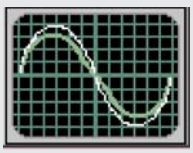
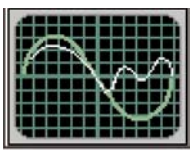
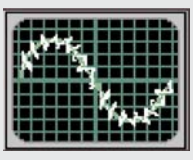
Information

- A study carried out by IBM showed that a typical computer is subject to over 120 power problems per month.

WHY THE UPS?

MGE UPS SYSTEMS

Power problems and their consequences

Type of problem		Causes	Effects
Blackouts (outages) Total loss of electrical power		■ Storms ■ Overloads ■ Faults ■ Accidents	■ Lost data in RAM or cache ■ Corrupted files ■ Data inconsistencies
Brownouts Undervoltage of more than 20% lasting a certain time		■ High electrical demand: machines starting, air conditioning	■ Overheating ■ Lost or corrupted data ■ Equipment damage ■ Operating errors
Sags Short term undervoltage		■ Overloads ■ Starting of major loads (lifts, lighting circuits)	■ Instability ■ Operating errors
Spikes Voltage transients from 600 V to 20000 V lasting from 10 ms to 100 ms		■ Lightning ■ Static discharges	■ Brief operating errors ■ System crashes
Surges Short term overvoltage > 10%		■ Shutdown of major loads	■ Brief operating errors ■ System crashes
Overvoltage Continuous overvoltage > 10%		■ Wiring errors ■ Faulty power regulation	■ Overheating ■ Component damage ■ Operating errors
Oscillations Harmonic oscillations up to 100% amplitude, 0.4 to 50 kHz		■ Power supplies ■ Incorrect electrical settings ■ Faulty control systems	■ Power supply malfunctions ■ Lost data
Interference Electromagnetic interference (RFI)		■ Corona discharge ■ Electric motors ■ Radio transmitters ■ Incorrect electrical settings	■ Program errors and corrupted files ■ Lost data

A UPS brings double peace of mind, that of your customer… and your own!

WHY THE UPS?

UPSs, the indispensable interface

Why is the UPS mandatory between the electrical source and sensitive loads(1)

- **The UPS is equipped with a battery**
  that supplies backup power to your sensitive loads in the event of a failure on the normal AC source. You are protected against loss of data and interruptions to operation.

- **In case of an AC power loss, the UPS provides enough time to:**
  - save your files,
  - shut down all applications and the system in an orderly manner,
  - where applicable, transfer to a backup engine-generator set.

- **All UPSs filter the power supply to some extent,**
  but only UPSs implementing double-conversion technology (continuous filtering) provide added protection against hardware and software malfunctions that can be caused by voltage fluctuations.

- **A UPS protects your:**
  - PCs,
  - servers,
  - workstations,
  - storage systems,
  - internetworking equipment,
  - as well as peripherals such as printers, scanners, modems, external disks, zip drives, etc.

- **UPSs are also available with communications software**
  Supervise the UPS and automatically shut down the protected systems safety over TCP/IP or the web.

- **UPSs are a vital part of your network.**
  Today, computer networks are so vital to business that companies demand a continuous supply of clean, uninterrupted power. Disturbances to networks are simply out of the question and network managers are discovering that UPSs are simply indispensable for smooth operation.

Because we are fully aware of these serious consequences and the expectations of the computer market, MGE UPS SYSTEMS will assist you in optimising the UPS solutions required by your customers' sensitive applications.

The various components in a computer network are subject, on the average and whatever the type of environment, to between 90 and 100 electrical disturbances per month.

There are, in fact, over 300 possible causes of damage due to electrical faults along a typical power line supplying computer systems (PCs, networks)..

- **For example, PCs, networking equipment, telecommunications equipment, medical and electronic devices, industrial processes, etc.**

WHY THE UPS?

Think UPS!

MGE UPS SYSTEMS

5 good reasons to use a UPS (from MGE UPS SYSTEMS)

1. **Avoid equipment damage due to a power outage**
   During an outage, the UPS protects your computer equipment (PCs, servers, peripherals, etc.).

2. **Avoid losing current work**
   The UPS provides the time required to save data and shut down applications correctly.

3. **Keep your network running during an electrical outage**
   The computer network is vital for most of your company's operations. The backup time offered by the UPS can keep it up and running during a power outage.

4. **Keep the company operating**
   Whatever the duration of the outage, electrical installations must be supplied with power.

5. **Filter electrical disturbances**
   Certain medical devices and other machines do not tolerate the slightest variation in voltage. With a UPS, they operate smoothly at all times.

8 good reasons to sell a UPS from MGE UPS SYSTEMS

1. **Unmatched know-how**
   in the UPS field, with over 36 years of experience.

2. **Worldwide coverage**
   with 150 locations around the world.

3. **A complete range**
   of UPS solutions, meeting the power protection needs of computer, telecom, medical and industrial applications, ...

4. **Products renewed every two years.**
   Over 50% of all products in the range

5. **Margins higher**
   than the market average.

6. **State of the**
   art techniques and technologies.

7. **Certification**
   by the main computer and telecom manufacturers.

8. **Solutions compatible with and certified**
   by the major manufacturers and software companies on the market