

## So What Exactly are "Green" Phone Systems?

You're deploying a new phone system, but the Marketing / PR department convinced management to "keep it green." What exactly does that mean, you ask? It means that phone systems, just like any other technology, can have a negative impact on the environment if certain factors are not taken into consideration during the selection process. This can impact you in few ways.

Like most other electronics, phone platforms contain certain potentially toxic elements, such as lead, mercury, and cadmium. The problem is that some of these elements do not biodegrade in landfills, and there is a real risk that these harmful metals could eventually find their way into groundwater.

In order to understand this risk-and how it can be mitigated-it helps to understand the new regulations that impact the research, development and the ultimate recycling of communication electronics. These regulations include:

### Restriction of Hazardous Substances Directive

The Restriction of Hazardous Substances Directive (RoHS) restricts the use of hazardous materials in the manufacture of various types of electronic and electrical equipment, and this directive does regulate the production of telecommunications equipment. It's the adopted standard used by the European Union (EU), meaning any equipment designed to compete in the EU market must comply with the RoHS. Current trends indicate that some forms of this standard may be coming to the U.S.

California passed the Electronic Waste Recycling Act of 2003 (EWRA). This law prohibits the sale of electronic devices after January 1, 2007 that are prohibited from being sold under the RoHS directive-though the scope differs slightly. Other US states and cities are debating whether to adopt similar laws, and there are several states that already have mercury bans in place.

### Waste Electrical and Electronic Equipment

The Waste Electrical and Electronic Equipment (WEEE) directive covers the disposal of electronic devices (also known as "e-waste"). This directive sets collection, recycling and recovery targets for electrical goods, and is part of an EU legislative initiative to solve the problem of huge amounts of toxic e-waste.

As with RoHS, the U.S. is developing some of its own electronics recycling and disposal regulations. The United States Congress is considering a number of electronic waste bills including the National Computer Recycling Act. And several states have passed their own laws regarding electronic waste management. California was the first state to enact such legislation, followed by Maryland, Maine, Washington, Minnesota, Oregon and Texas.

## How can you respond to these developments?

OK, so there are regulations implemented in the European Union, and it looks like they are coming to the US. So what; you do your part, right? Maybe the corporate policy requires employees to turn off monitors and office lights while at lunch. Or maybe you really want to flex that expensive infrastructure you heavily invested in. After all, there are thousands of dollars in servers, switches, fancy routers and voice communication equipment.

The rack space in your Communication Room is a premium-no doubt about it. You even standardize on 1U equipment. After all, it takes up less space, nicely packing those servers in the rack. However, the smaller, more compacted components generate heat-tons of it. To combat this, equipment manufacturers install high speed fans to air-cool components. Fans, in turn, use more energy to dispel the original inefficient energy (heat). The result: a dedicated HVAC system that controls the climate of the Communications Room. Of course, the HVAC system requires extremely large amounts of energy as well. What sense does this make?

In truth, there are alternatives to high density, high/heat devices-specifically with regard to voice communication products. Though requiring much more innovation, convection cooled communication equipment is available that does not require fans to cool them. Moreover, these devices are consciously designed to allow air to passively flow over the components. This means no unneeded heat generation from fans, no moving parts to cool the heat and more importantly, no dedicated HVAC system to cool the Communication Room. The net result of these efforts: decreased cost in both equipment charges and recurring electric bills. And think about it: What happens when the fan dies on that business-critical server? Business stops.

Finally, as you dispose of your obsolete phone system, be aware that almost all components are recyclable to some degree. Dumping old electronics into a landfill is the worst possible method of disposal. A competent vendor should be able to assist with recycling close to 100% of your old system. Be sure to discuss with your vendor what their recycling plan is and how they can help you remove your current phone system.

If your directive is to deploy a new phone system, then why not do it in an environmentally sound way? Following these simple steps can help to prevent toxic metal contamination to the environment and demonstrate your ability to "keep your company green."