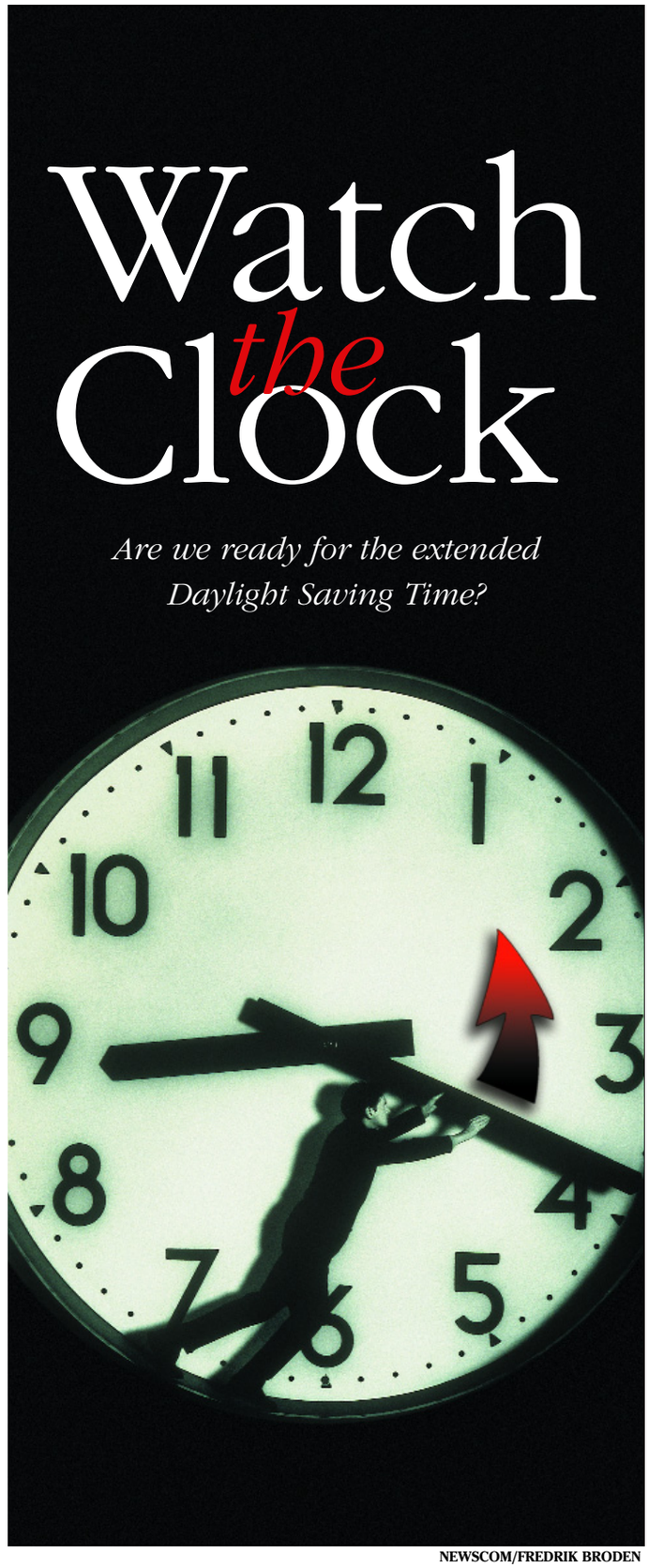
Watch the Clock

Are we ready for the extended Daylight Saving Time?



NEWSCOM/FREDRIK BRODEN

BY HILLEL I. PARNESS

IN MARCH 2007, the U.S. Daylight Saving Time (DST) rules will change, as part of a congressional effort to reduce energy costs. The legislation, however, fails to take into account the impact these changes will have on businesses that use and rely upon the accuracy of computers and other devices that automatically adjust themselves for the current DST rules. Simply stated, these computers and devices will be wrong unless adjusted or replaced, and the errors may affect companies to their detriment.

This article provides some practical guidance for the general counsel of a company that wishes to assess the level of potential risk represented by the new DST rules. It includes a four-step approach to the issue, focusing on: (i) internal issues having to do with the way the rules affect companies' ability to function; (ii) external issues in terms of the way the rules affect companies' products and services, as well as the way companies' computers and devices exchange information with systems across the Internet and otherwise; (iii) liability issues; and (iv) planning.

Primary Challenge

Currently, for most of the United States, DST lasts from the first Sunday in April (when the time "springs ahead" from 2 a.m. to 3 a.m.) to the last Sunday in October (when the time "falls back" from 2 a.m. to 1 a.m.). The Energy Policy Act of 2005, which President George W. Bush signed into law on Aug. 8, 2005, extends DST by several weeks on the front and back ends. Beginning in 2007, the United States will spring ahead on the second Sunday in March, and fall back on the first Sunday in November.

The U.S. DST rules were last changed in 1986, and since that time the country has enjoyed many significant technological advances, as well as a proliferation of computers and computerized devices. One feature in particular presents the primary challenge to compliance with the new DST rules, that being the built-in DST functionality in many computers and computerized devices. These computers and devices are programmed to automatically adjust their internal clocks twice a year, based upon current DST rules. Left alone, they will continue to adjust themselves according to the current rules, even after the rules change in 2007. Currently this is a very convenient feature—one need not manually change the clocks on these devices twice a year because they adjust themselves.

To maintain accuracy when the new rules take effect, however, one will have to begin adjusting these devices four times a year—(i) at the new "spring ahead" date; (ii) at the old "spring ahead" date; (iii) at the old "fall back" date; and (iv) at the new "fall back" date (or twice a year if the functionality can be turned off). Errors are inevitable, and errors can be costly, which is why companies are advised to begin thinking now about how they could be impacted by such errors, and how to go about upgrading or replacing computers and devices before the new rules go into effect.

Companies' Reactions

Companies should take the time now—before the new DST rules go into effect—to carefully consider the full range of effects the new DST rules can have on them, and the full range of computers and devices that will potentially be affected. Over the past several months, some companies have begun to explore and discuss these issues, and have responded in a variety of ways. The following are some examples, with some thoughts in response:

"Mission critical." This comment came from the head of a company that manufactures and installs custom,

high-end devices. Since 1990, his company has included in each one of its devices automatic DST functionality, which can only be modified on-site. The company has concluded that the appropriate thing for it to do is to send out teams to upgrade all of the devices sold and installed over the last decade. Management has not yet decided under which circumstances to bill the customers for the work. It is likely that there are many more companies out there that are similarly situated, but it is also likely that many of them are not aware of the DST rule changes, or that they have not taken time out to think about the effects.

"This will not affect us." Some technology people are reporting that their companies' systems will not be impacted by the changes to the DST rules. This is obviously very good news, if it is accurate. The cautious general counsel may want to dig deeper, however, and think about what devices beyond his or her company's networked PCs might be impacted, and whether his or her company interacts with computers elsewhere—especially overseas—in situations where time-accuracy is important. He or she will also want to understand the basis for the technologist's response—is it because the computers or devices do not automatically adjust, because the computers will be compliant, because time-accuracy is not a critical issue, or because of some other reason entirely?

"They'll fix this." This statement is true—to an extent. The proprietors of the major computer operating systems will release patches to deal with the DST rule changes. What they and their customers may find more challenging is ensuring that all of the affected computers are patched correctly, and in time. This type of response also ignores standalone devices and specialized programs, which may also be affected.

"It's like Y2K, and Y2K was overblown." Many people are wary about anything that reminds them of Y2K. Although clearly problems were averted by the steps taken in the period leading up to Y2K, there is also a strong perception that the efforts were disproportionate to the problem. Rather than trying to ignore the DST issue because of the stigma of Y2K, however, people should learn from the Y2K experience, and act to pinpoint the critical areas that will require attention to maintain compliance with the new DST rules. There are also important differences between Y2K and the DST rule changes, some of which may make DST a more challenging problem.

The built-in DST functionality in many computers and computerized devices presents the primary challenge.

Examples of Affected Devices

Companies thinking ahead about the DST rule changes are also helping to identify potential classes of computers and devices that may be affected by the DST changes. Here are just a few:

Computers. The operating systems of most modern computers include automatic DST adjustment of the system clock. In Microsoft Windows, this functionality can be accessed by double-clicking on the time and selecting the "Time Zone" tab. The internal time of the computers and computer servers may play a part in a variety of functions within the company (such as employee time records), and inaccuracy could lead to costly problems.

Handheld Devices. The spread of handheld devices is on the rise across all types of companies. Generally, these devices operate by "syncing" with personal computers and servers, so that the information on the handhelds and on the company's systems matches. Conflicts between the information on the handhelds and on the system are resolved (at least in part) based on the time the information was created on each. Errors in the time on the handheld, the personal computer or the server could potentially result in lost data.

Financial Systems. The international systems that process and price securities orders rest upon assumptions of time-accuracy—the recent investigations into the mutual fund industry focused in large part on whether purchase and sale orders were received before or after 4 p.m., and whether those orders were priced properly based on when they were received. To the extent that any of the computers involved in these processes require modifications to comply with the changing DST rules, there may be risk.

Consumer and Commercial-Grade Electronics. An increasing number of consumer electronic products, such as video cameras and DVD recorders, are designed to automatically adjust their internal clock mechanisms for the DST rules. If the internal time system in the surveillance system that watches a company's headquarters is not accurate, the records

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DST Changes

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the system creates will not be accurate (or their accuracy may be subject to challenge).

Timers. Many homes and businesses install programmable timers in place of light switches, and a number of the more recent models have been upgraded to automatically adjust for DST.

Watches and Clocks. Many watches and clocks are designed to automatically adjust themselves for DST, based on built-in tables of the current DST rules.

Medical Devices. It has been suggested by people in the medical field that there may be medical devices—such as devices that dispense medicine or capture vital signs over time—that may also be affected.

Approaching the Problem

General counsel might begin assessing the impact of the DST rule changes using the following four-step approach, although undoubtedly the approach will have to be tailored to fit the needs of the particular company and industry.

Internal Issues. First, a company should take an audit of its internal systems and processes, to identify any potential trouble spots, and all of the mission-critical computers and devices that need to be upgraded or replaced. Knowing the answers to the following questions would be helpful:

1. Which internal computers, systems or devices at the company have internal clocks?
2. How does the company go about adjusting for DST presently, and who is currently in charge of that process?
3. Which of the company's clocks are changed automatically for DST?
4. Which of the company's clocks must maintain time-accuracy for our business?
5. How does the company presently go about upgrading computer software, and who is currently in charge of that process?

External Issues. Second, moving the focus outward, companies should know how their systems interact with the outside world. Companies should not lose sight of the fact that their computers often exchange information with computers and devices, across the Internet and otherwise, that are outside of their control. The accuracy of those external computers and

devices could raise many of the same issues implicated by companies' internal systems. To that end, the following questions might help to address those issues:

1. Does the company sell computers or other products that automatically adjust for DST?
2. What is the company doing to address the DST rule changes in future products?
3. When is the appropriate point to begin selling devices compliant with the new rules, and how should the company communicate the change to our customers?
4. What is—or what should the company's policy be—for upgrading or replacing products already sold?
5. What is—or what should the company's policy be—for inventory not yet sold, whether still at the company, or out in the marketplace?
6. Does the company otherwise send computers or computerized devices outside the company?
7. Do any of those computers or devices change their clocks automatically for DST?
8. Is it important that those computers or devices maintain time-accuracy?
9. How does the company now go about upgrading or replacing those computers and devices, and who is currently in charge of that type of process?
10. Do the company's internal computers and devices communicate with computers and devices external to the company?
11. Could time-inaccuracy of those external systems affect the company's business, even if its internal systems are upgraded?
12. Who in the company is most likely to know—or is best suited to find out—the technical details of the external systems?

Liability Issues. Third, it is important to gain a clear understanding of any liability issues that could possibly arise from DST-related errors or failures. By way of contrast with Y2K, the U.S. government has not made any move as yet to limit liability regarding DST-related failures in 2007. The Y2K Act placed limits on the types of lawsuits that could be brought, and the prerequisites that had to be satisfied.

In the absence of such legislative efforts, litigation over DST-related failures remains a real possibility. Past experience shows that the fortunes of businesses can be significantly affected by the particular apportionment of liability in key contracts. Liability for failures stemming from the DST rule changes is a new issue most contracts do not currently address, at least directly.

As new contracts are drafted, and old contracts come up for renewal or renegotiation, companies will have an opportunity to consider adding "DST clauses" to specify where the burden of dealing with DST-related failures will lie. For example, in software contracts, the customer can have the vendor warrant that the systems it designs and installs will be DST-compliant, and guarantee that the vendor will take all steps necessary to keep the systems compliant with any changes to the DST rules. Without such a clause, the customer runs the risk of having to pay for programming upgrades each time the rules change (or revert), or even of not being able to find someone to take care of the upgrades when the time comes.

All of this suggests that companies should conduct an audit of their contracts and relationships, so as to identify any specific instances where a "DST Clause" could help insulate the company from liability, and proactively smooth out company operations. The general counsel leading this effort might seek answers to the following general questions:

1. What does the company's vendor contracts (whether the company is vendor or vendee) say about system accuracy generally, and about time-accuracy specifically? To the extent

the issue is addressed, where do the contracts currently place responsibility?

2. What do the company's product warranties (if applicable) say about the same issue?

3. Do any of the affected contracts or warranties come up for renewal or renegotiation between now and March 2007?

Planning. Finally, once the information-gathering phases are completed, the company can put together a plan to deal with the upcoming DST changes. The plan should address:

1. How to go about ensuring that all internal systems, especially the "mission critical" systems, will continue to work properly under the new DST rules.

2. How to deal with any past, present or future products sold by the company that may need adjustment or replacement.

3. How to go about amending or replacing existing contracts, and enhancing future contracts, to address DST issues.

The plan might also address longer-term issues. For example, a company might consider whether changes to the DST rules and/or expansion of the DST period are good or bad for the business, and whether the company may want to explore doing something about it, such as approaching elected representatives with their position.

The company might also think about how to minimize the impact of future DST changes on the company. Congress plainly has the power to change the rules again. Indeed, within the Energy Policy Act of 2005, Congress expressly reserved the right to "revert" to 2005 DST rules as early as the end of 2007, based on the results of a Department of Energy study regarding energy savings. Any plan addressed to readiness and compliance with the 2007 DST rules should—to the extent possible—be designed in such a way that it can be re-implemented to deal with the next rule change or reversion, optimally in a way that takes greatest advantage of the "sunk costs" associated with preparation for 2007.

With just over a year to go before the DST rule changes go into effect, it is not too early for companies to begin to deal with them. Focused, open discussions of these issues among management, technologists and counsel are encouraged to identify the particular impact of the changes, and to fashion an appropriate response.