Chapter 10

“When?” It’s a Basic Question That We Ask All the Time

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Abstract When did “it” happen? When will we do “it”? At face value, this is pretty simple and easy stuff. For many social interactions, getting the time right to within a few minutes is just fine. There are many billing applications that need better accuracy, as they charge in six-second increments. How important might accurate time be in some medical and health-care situations? In the final nine-seconds before the total power failure that hit the US northeast and Canadian east coast in 2003, about 18,000 events happened in the power distribution grid. The myriad of clocks used to record these events were pretty much unsynchronized and nowhere near accurate. So the logged information was basically useless.

The “When” question is answered with a “time stamp.” A time stamp might be a note in your calendar (dinner at 6 pm) or the “Date” entry in an email message. We’ve all been using a very simple and basic time stamp to record the time since long before we had computers. We have the knowledge and experience to engineer, implement, and deploy a much better time stamp. High-quality time stamps improve the usefulness of data. Better data means things like advances in health care, the ability to make better decisions, better efficiency, reduced liability, and better profitability and financial management.

This talk will explore some of the problems with existing time stamps and the consequences of these problems. To learn about NTF’s solution to these problems, its General Timestamp API and Library, and how it can help, visit <http://www.nwtime.org>.

Keywords Timestamps • General Timestamp API • GTSAPI • Network Time Foundation • SCADA

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