with intermittent (predictable and unknown) connectivity, large and/or variable delays, and high bit error rates. To provide its services over existing domain specific protocols, the DTN protocols reside at the application layer of the TCP/IP stack, forming a store-and-forward overlay network. The key capabilities of the Bundle Protocol include custody-based reliability, the ability to cope with intermittent connectivity, the ability to take advantage of scheduled and opportunistic connectivity, and late binding of names to addresses.

Internet standards are published in Request For Comments (RFCs), and the Bundle Protocol and LTP are described in RFC 5050 and RFC 5326, respectively. BP provides the store-carry-forward, custody transfer and naming capabilities of the DTN, while LTP was specifically developed for long-delay links. LTP allows for "red" and "green" data portions in a single session, where the red data portion uses retransmission and the green data portion does not. Unlike common Internet retransmission protocols, LTP adds the ability to suspend and resume timers when the link’s status changes. On occasion, the models are extended to include nonstandard experimental features for validating project-specific performance or behavioral requirements. For instance, unlike standard simulation models, the BP model supports external traffic injection, which was used to verify correct behavior of the SharedNet middleware over DTN protocols and described at the SMC-IT 2006 conference (Second over DTN protocols and described at the SMC-IT 2006 conference (Second).

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Furthermore, the software re-enables Eclipse to stop building while checking out the plug-ins as soon as it is downloaded. As a result, the checkout process now saturates the bandwidth in order to get all the plug-ins checked out as fast as possible. For comparison, a checkout process that ranged from 8-200 Kbps from a developer’s home is now able to saturate a pipe of 1.3 Mbps, resulting in significantly faster checkouts.

Eclipse IDE (integrated development environment) tries to build a project as soon as it is downloaded. As part of another optimization, this innovation programatically tells Eclipse to stop building while checkouts are happening, which dramatically reduces lock contention and enables plug-ins to continue downloading until all of them finish. Furthermore, the software re-enables