

That Just about Wraps Things Up for SMB

Let's just get rid of these horrible protocols.

— Andrew Tridgell,
Samba Team Leader

If the Internet has proven anything, it's that a very large number of primates banging randomly on keyboards over a long enough period of time can and will produce some amazingly useful software. On the other hand, if you gather some of those primates together, place them into cubicles, and train them to perform like circus animals...

...well, we've just put a lot of effort into cleaning up the mess that was made in those cubicles. A shame, really. It was a nice little protocol when it started out.

Although the SNIA gave it their best shot, there are currently no industry committees or standards groups writing *bona fide* specifications to be reviewed and voted on, and no standard test suites to verify conformity. That's not to say that specifications and test suites don't exist — quite the contrary. The problem is that they have no teeth. With no real standards and no real enforcement, the only measure of correctness for an SMB implementation is whether or not it works *most* of the time. Since *most* of the clients out there are Windows clients, the formula simplifies down to whether or not an implementation works with Windows. An additional problem is that SMB itself is not enough for true interoperability with Windows systems — particularly if you want to write a workable server.

In San Jose, California, there is a mansion known as the Winchester Mystery House. It started out as a simple farmhouse, but it was expanded over a period of thirty-eight years by a millionaire widow with an obsessive compulsion to keep on adding new rooms. It has stairways that rise directly into the ceiling, windows in the floor, doors that open to solid walls... and that's just for starters. The building covers four and a half acres and has an estimated 160 rooms.

CIFS is like that.

The original SMB protocol was simple and well suited to its environment. Over the years, however, it has been greatly expanded. Several sub-protocols have been added on as well. These subprotocols (which include the Extended Security protocols, RAP, MS-RPC, etc.) are implemented by Windows — so, if you want to build something truly compatible, SMB alone just isn't enough.

...but don't go away feeling that it is all just a hopeless mess. It is really a question of how much effort you are willing to put into solving the problems you will encounter. Take it one step at a time, because the individual pieces are much less daunting than the whole.