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Connecting streams like a garden hose

Another innovation of UNIX was the development of pipes, which gave programmers the ability to string together a number of processes for a specific output.

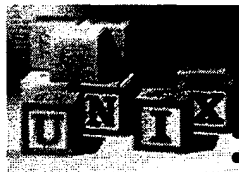
Doug McIlroy, then a department head in the Computing Science Research Center, is credited for the concept of pipes at Bell Labs, and Thompson gets the credit for actually doing it.

McIlroy had been working on macros in the later 1950s, and was always theorizing to anyone who would listen about linking macros together to eliminate the need to make a series of discrete commands to obtain an end result.

"If you think about macros," McIlroy explained, "they mainly involve switching data streams. I mean, you're taking input and you suddenly come to a macro call, and that says, 'Stop taking input from here and go take it from there.'

"Somewhere at that time I talked of a macro as a 'switchyard for data streams,' and there's a paper hanging in Brian Kernighan's office, which he dredged up from somewhere, where I talked about screwing together streams like a garden hose. So this idea had been banging around in my head for a long time."

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