TOSHIBA has developed two small fuel cell prototypes that can dramatically increase the playing time for mobile music players.

A fuel cell unit the size of a pack of chewing gum can power a flash-memory-based player for about 35 hours on a single charge, using highly concentrated methanol as its fuel, the Japanese technology giant said.

For a hard disc drive system, a fuel cell unit the size of a person's palm could let the player run for 60 hours on a single charge, up from around 16 hours now, the company said.

"These sizes can be reduced substantially by removing extra components and applying optimal design for commercial products," Toshiba said, adding that the prototypes were the smallest of their kind.

Toshiba hopes to introduce the products commercially in 2007.

"The design of the fuel cell units reflects current moves toward international standardization of micro fuel cells" and meets global safety standards, it said.

Agence France-Presse