



seeing the future

Back in 2002, Steven Spielberg's indication of what the future of technology holds in 'Minority Report' – including spiderbots, predictive policing and gestural interface – may have seem farfetched, but fifteen years since the film was made – and only 39 years away from the idealized period of 2054 in which it's set – it's already apparent that holographic advancements are well on their way to catching up, and potentially even surpassing these predictions.

In 'Minority Report', iris recognition occurs everywhere, where devices are used to scan distinctive features of the iris and are used by means of security and ad personalization. These personalized billboards are plastered in shopping malls, where iris recognition devices and biometric sensors are used to register people and instantly adopt their ads to their name, mood and even interests. Despite technological advancements not quite having reached that point, there are certainly indications of them heading that way. Bryan Gardiner states, "NEC is experimenting with dynamic ads that target specific shopper characteristics, such as gender, ethnicity and age. Using billboards equipped with camera and facial-recognition software, the company is able to target a given message with a great degree of specificity. Not far over the horizon, facial recognition cameras in malls ... that can guess age and gender, then flash demographically targeted ads as you pass by."

Personalized adverts have shown significant signs of improvement over the years, where they now monitor searches in order to tailor their

adverts to individual users, prompting items to buy or to keep track of searching/viewing habits.

Recent advancements in holograms indicate the pace at which technology is developing. For years, society has yearned for holograms that you can touch and interact with, much like in the film, and researchers at the Digital Nature Group at University of Tsukuba have since created interactive holograms that you can feel. Referred to as 'Fairy Lights', a source states "Shock waves are generated by plasma when a user touches the plasma voxels... The user feels an impulse on the finger as if the light has physical substance."

'Hatsune Maku' is Japan's humanoid persona voice, whose name stands for "first sound from the future". Developed by music-technology based company, Crypton Future Median, the virtual singer generates a human singing voice, and has proven to be extremely popular since its debut in 2007 despite only being a digital illusion, and will actually be going on tour in the US and Canada in 2016. Another breakthrough is the first political virtual protest that occurred in Spain this year, which saw over 2000 hologram projections from protesters' webcams marching outside the Spanish parliament to protest against a law that will ban protests from occurring in front of government buildings without permission.

The future may have seemed far-fetched then, but with this recent indication of what already exists and certainly what lies ahead, not even spider bots are out of the question.