

Star Trek Technologies That Came True

For geeks growing up in the 1960s, 80s and 90s, a vision of the future has been provided by one very successful television franchise: Star Trek. And the future, it turns out, is coming sooner than even the show's writers could have anticipated. Here are 12 gizmos used on the Star Trek television shows that are now becoming real.

1. FOOD REPLICATOR

Captain Jean-Luc Picard used to say "Tea, Earl Gray, hot!" and it would be replicated instantly. Today's 3D printers don't tackle tea, but there are machines that actually can print food. And other printers, like the MakerBot Replicator 2 are quite adept at making small objects—just as they were shown to do on later episodes of Star Trek: The Next Generation.

2. UNIVERSAL TRANSLATOR

In several episodes, we marveled at the universal translator, which decoded what aliens said in real-time and in the later shows, it was integrated into the communication badges, which explains why basically everyone, regardless of their home planet, spoke English. Now, there's an app for that. Voice Translator by TalirApps understands 71 languages (no Klingon yet, though). You speak in your native tongue and the app translates your phrase into another language.

3. TABLET COMPUTERS

Lieutenant Commander Geordi Laforge used a tablet computer, which they called Personal Access Data Devices, or PADDs to punch in coordinates for the next star system. Other Starfleet personnel used them to watch video and listen to music, the exact same things we use tablets for today.

4. TRICORDER

In the TV show, a tricorder is a handheld device that scans for geological, biological, and meteorological anomalies. Handy, isn't it?! In 2012, Peter Jansen from McMaster University in Ontario built a working prototype that scans for magnetic fields and other interference. And there are lots of other real-world tricorders, too.

5. HOLODECK

On Star Trek: The Next Generation, you could walk into a chamber onboard the Enterprise and visit your home planet for a quick barbecue, or even have an affair with a hologram. Leave it to a bunch of University of Southern California students to make virtual reality a little more down-to-Earth. Project Holodeck used virtual reality goggles to create a fictional world.

6. COMMUNICATOR BADGE

On the original series, Kirk and crew carried handheld communicators. But in Star Trek: The Next Generation, Starfleet personnel wore communicator badges on the left breasts of their uniforms. A California start-up called Vocera has created a similar device you pin to your shirt. They're used mostly in hospitals to avoid having constant overhead pages.

7. TRACTOR BEAM

Pulling a ship with an invisible tractor beam seems impossible, but two New York University professors are making it so. Their experiment, which uses a light beam to control tiny microscopic particles, is not going to be deployed on the next NASA mission, but shows we're making progress.

8. NATURAL LANGUAGE QUERIES

In the Star Trek universe, you can talk to a computer in casual conversation. These days, we've got Apple's Siri and Google Now, and while they aren't fully developed systems yet, they are baby steps toward a service like Star Trek's computer, which has a complex understanding of context. Google even codenamed their voice-based service "Majel" in honor of Star Trek's creator's wife, who was the computer voice in the Next Generation series.

9. WARP DRIVE

No one in Star Trek ever sits down and explains how a warp drive works in detail, but we know it has something to do with bending space and traveling faster than the speed of light. Doesn't seem possible, but NASA has suggested that a warp drive is possible.

10. PHASER

Captain Kirk was pretty handy with a phaser, and he didn't always set his to stun. Ironically, we've been using something similar since the first Iraq War. Known as a dazzler, the directed-energy weapon sends a pulse of electromagnetic radiation to stop someone dead in their tracks.

11. TELEPORTATION

To get from place to place, Captain Kirk and company didn't need an airplane—they didn't even need a space elevator. Instead, they teleported using the U.S.S. Enterprise's transporter. We've already done some teleportation, particularly, of photons and atoms. These particles don't disappear and reappear, though. An exact copy appears on the other side, while the original photon is destroyed. We consist of 15 trillion cells, so we'll need to wait a few centuries before we're teleporting like Kirk. And we'll still have to destroy the original.

12. HYPOSPRAY

In the world of Star Trek, there's no need for needles, medicines were administered through the skin using painless jet-injected hypospray. Recently, MIT created a similar device that delivers a drug through the skin at speeds of up to 340 meters per second and in under a millisecond. The amount of drug can vary, as can how deep it is injected. And as far as the patient is concerned, they shouldn't feel anything other than the tip of the injector against their skin.

Adapted from www.mentalfloss.com

Ex. 1 Find the words or expressions in the text which mean the following:

- 1) a person who is interested in science or other niche areas: _____
- 2) to predict and prepare for sth: _____
- 3) sth that produces copies of things: _____
- 4) to deal with sth: _____
- 5) to change the shape of sth: _____
- 6) simply: _____
- 7) to give sth a secret name: _____
- 8) sth that isn't normal: _____
- 9) an interruption: _____
- 10) a room: _____
- 11) a group: _____
- 12) neverending: _____

Ex. 2 Match the expressions from the two columns into logical collocations:

- | | |
|----------------------|--------------|
| 1) a television | of sth |
| 2) to be adept | particles |
| 3) to marvel | device |
| 4) regardless | franchise |
| 5) to punch | with sb |
| 6) a handheld | progress |
| 7) a working | at doing sth |
| 8) to have an affair | prototype |
| 9) microscopic | sth in |
| 10)to make | at sth |

Ex. 3 Provide English equivalents of these expressions:

1) gadżet	7) na pokładzie/pokładowy
2) natychmiast	8) wdrożyć coś
3) w czasie rzeczywistym	9) zapytanie
4) język ojczysty	10)małe kroczki
5) współrzędne	11)podać lek
6) coś jest poręczne	12)różnić się

Grammar corner...

Do you think Star Trek creators **WOULD HAVE BELIEVED** that in just several decades the technologies they **HAD ANTICIPATED** would become reality? In the first part of the sentence we speculated about the past, in other words we used a modal verb (could, may, might, should, needn't, etc.) and have and the **THIRD** form of the verb. As simple as that. Please remember that there's a difference between: I didn't need to come (and I didn't) **AND** I needn't have come (but I did, unnecessarily).

Ex. 4 Choose the correct form.

1. If you wanted to stay in that hotel you __ booked before!

- A. could have
- B. might have
- C. should have

2. He __ committed the crime, as he had both the motive and the opportunity.

- A. can't have
- B. could have
- C. would have

3. If I had known about your accident, I __ phoned you.

- A. may have
- B. should have
- C. would have

4. Lucy __ attended the concert, but we aren't sure.

- A. can't have
- B. may have
- C. should have

5. You __ finished that book already! You only started reading it an hour ago.

- A. can't have
- B. might have
- C. shouldn't have

6. I think they __ got lost - surely they'd be here by now!

- A. can have
- B. must have
- C. should have

7. Oh no! My phone isn't in my bag. I __ left it on the train.

- A. can have
- B. might have
- C. should have

8. She __ been a lawyer but she decided to study accountancy instead.

- A. could have
- B. may have
- C. might have

9. You __ gone to Dan's party - it was fantastic!

- A. must have
- B. should have
- C. would have

10. I'm so sorry I woke you up. I __ called you if I knew you were sleeping.

- A. might not have
- B. shouldn't have
- C. wouldn't have

GLOSSARY	
a geek	maniak komputerowy
to anticipate sth	przewidzieć coś
a replicator	powielacz
to tackle sth	poradzić sobie z czymś
to bend sth	nagiąć coś
basically	w zasadzie
to codename sth	nadać czemuś kryptonim
an anomaly	anomalia
an interference	zakłócenie
a chamber	pomieszczenie / komnata
a bunch	zgraja / grupa
constant	stały
a television franchise	cykl telewizyjny
to be adept at doing sth	być w czymś dobrym
to marvel at sth	podziwiać coś
regardless of sth	bez względu na coś
to punch sth in	wprowadzać (np. dane przez interfejs)
a handheld device	urządzenie przenośne
a working prototype	działający prototyp
to have an affair with sb	mieć z kimś romans
microscopic particles	mikroskopijne cząsteczki
to make progress	czynić postęp
a gizmo	gadżet
instantly	natychmiast
in real-time	w czasie rzeczywistym
a native tongue	język ojczysty
coordinates	współrzędne
sth is handy	coś jest poręczne

onboard	na pokładzie / pokładowy
a query	zapytanie
to deploy sth	wdrożyć coś
baby steps	małe kroczki
to administer medicine	podać lek
to vary	różnić się
to stun sb	ogłuszyć kogoś

ANSWER KEY:

Ex. 1

- 1) a geek
- 2) to anticipate sth
- 3) a replicator
- 4) to tackle sth
- 5) to bend sth
- 6) basically
- 7) to codename sth
- 8) an anomaly
- 9) an interference
- 10) a chamber
- 11) a bunch
- 12) constant

Ex. 2

- 1) a television franchise
- 2) to be adept at doing sth
- 3) to marvel at sth
- 4) regardless of sth
- 5) to punch sth in
- 6) a handheld device
- 7) a working prototype
- 8) to have an affair with sb
- 9) microscopic particles
- 10) to make progress

Ex. 3

- 1) a gizmo
- 2) instantly
- 3) in real-time
- 4) a native tongue
- 5) coordinates
- 6) sth is handy
- 7) onboard
- 8) to deploy sth
- 9) a query
- 10) baby steps
- 11) to administer medicine
- 12) to vary

Ex. 4

- 1) C
- 2) B
- 3) C
- 4) B
- 5) A
- 6) B
- 7) B
- 8) A
- 9) B
- 10) C