

Michelin takes wraps off connected tire concept, 3-D printing, bio-sourced materials in the mix

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(Tech Xplore)—Michelin has let the world know of its concept tire and it does raise the idea of tires to a higher level.

They are airless. No explosions, no blowouts.

They are rechargeable.

They are made from organic materials. It is a 3D printed organic tire developed from [biodegradable materials](#), said a Michelin video. Not only that, it is a connected tire. "A connected tire, it provides real-time information about its condition and is integrated with innovative services."

Michelin presented this tire concept, called Vision, at the 2017 Movin' On conference in Montreal. This is a three-day symposium, talking up society's mobility challenges.

The tires at least in concept stage address a design and set of functions pleasing to the eye.

Autoblog said the tire was created using materials derived from [wood chips](#), straw, sugar byproducts, and orange [peels](#).

TechSpot said, "Using biodegradable [materials](#) such as wood chips, straw, and [orange peels](#), the Michelin R&D team can make synthetic butadiene, a principle component of rubber. The material can then be used to create a tire customized to the individual user's needs using 3D printing [technology](#)."

Michelin elaborated on advantages involved with 3D printing. "With the aid of 3D printers, it is possible to use just the right amount of rubber on the tire and thus extend its life depending on needs, thereby ensuring mobility in all situations."

In the video, a couple gets in the car and are ready to embark on a trip to the mountains. The driver gets a screen message, saying he should change to winter tires.

Autoblog said, "If you plan to take a trip to the mountains (as in the video above) you can stop at a 'Print & Go' station along the way to put the necessary winter tread on your car's tires. It'll only put on the amount of rubber you need for your trip, and you can reload and switch up the tread when you return home." Watching the video one can appreciate the nature-inspired design. "Its alveolar [structure](#) is inspired by nature," said John Beltz Snyder, " and "It looks a bit like a sand dollar one would find at the beach, while a closer look shows its construction to resemble coral." It is solid in the center, flexible on the outside.

The feature that especially stands out in observers' minds is the rechargeable tread, applied via 3D printing.

"Michelin envisions a future," said Snyder, "where the connected tire will tell you when you need to add more rubber to the tread, and can customize that tread depending on your destination, climate, and driving style."

Questions arise then over when will we see these tires? How much will we have to pay? What's the payment model for reprinting the treads? According to reports, that stage has not been reached; this is a concept that nonetheless tells us what Michelin is thinking about for sustainable mobility.

BMW BLOG pointed out, "there would have to be infrastructure put in place for these 3D printing [stations](#) to exist and be located where they're optimal."

Although there are questions surrounding this [concept](#) tire, added *BMW BLOG*, "The only thing we do know is that it's fascinating and that it could seriously change the [tire](#) game forever."

More information: michelinmedia.com/pages/blog/d...

[ail/article/c0/a620/](#)

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