

METACLOAK™ FAQ

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- Why is the cloak so big?
- Why microwaves?
- Can you cloak Harry Potter?
- Does the cloak have a practical application?
- Can you cloak an elephant?
- Can you make my little brother go away?
- Why didn't you publish this in a physics journal?
- Have the results been verified?
- What do you do with the wideband cloak now?
- What have you learned from the cloak?
- Has your company morphed into something else?
- What made it possible for you guys to do this where others had not?
- Who funded your cloak work?

Q: Why is the cloak so big?

A: The size of the cloak scales with wavelength. Since we are doing this at microwaves, which have wavelengths of between 60 cm and about 20cm, the size of everything is fairly large. When practical cloaks are eventually made for IR and visible light, which have wavelengths smaller than a pinhead, they will probably be thin coats or coverings.

Q: Why microwaves?

A: The equipment and the fabrication are much easier to work with at microwave rather than visible light. It is a great frequency range to experiment and develop at for these reasons.

Q: Can you cloak Harry Potter?

A: Not unless Harry is a microwave critter with a size a few inches high and less than a foot wide.

Q: Does the cloak have a practical application?

A: No metamaterial cloak made by anyone has a practical application. They are all demonstration units. They are a guide to what is physically possible but don't demonstrate real applications.

Q: Can you cloak an elephant?

A: No.

Q: Can you make my little brother go away?

A: I'm tellin' Mom!

Q: Why didn't you publish this in a physics journal?

A: Publication is fine, but the web itself defines publication. The data is indeed 'published' on this web site.

Q: Have the results been verified?

A: We will be vetting 2-3 groups at universities and government labs in the US to work with on this. It's not exactly difficult to make the measurements. Probably you will see a 'science fair' version in a few years. But to answer your question—yes. We've had patent lawyers and engineers scrutinize and verify it. The effect we are seeing is obvious, robust, and high signal to noise. It is not a marginal effect subject to interpretation.

Q: What do you do with the wideband cloak now?

A: Donate it to the Smithsonian (heheh!) The cloak is a working platform for testing ideas and that's its use for the next while.

Q: What have you learned from the cloak?

A: Plenty. It helped define and gel the advantages and constraints of metamaterials. Mostly it made some big constraints that other had predicted or been limited by, disappear. Fundamentally, the 'lessons learned' have been invaluable in APPLYING wideband metamaterials to things other than cloaks. Antennas, for example. It is a great extension of our fractal antenna technology and a wonderful tool that opens options when needed. And its made a stodgy field—sorry; antennas as a field ARE stodgy—really quite fun, the same way that the first efforts with fractals in antennas were fun, say, 15 years ago.

Q: Has your company morphed into something else?

A: No. We are an antenna and electronics company that uses fractals for the benefit of our customers. We use fractals in our metamaterials. A logical extension for a technology-based company. We love and live to innovate.

Q: What made it possible for you guys to do this where others had not?

A: Smarts; focused team effort; experience on tough 'advanced projects'; knowledge-base; the thrill of the chase; luck.

Q: Who funded your cloak work?

A: We used an ancient and out-of-date paradigm called: "self-funding". It's a common Yankee tradition in these parts. We didn't seek outside support.
