
GLENN RESEARCH CENTER
NASA

1
00:00:00,046 --> 00:00:02,146
When I was younger
I worked with Legos.

2
00:00:02,606 --> 00:00:06,646
I had buckets and buckets
of legos that I would take

3
00:00:06,646 --> 00:00:09,466
and build various
things with them.

4
00:00:09,856 --> 00:00:11,786
It was one of my interest.

5
00:00:12,326 --> 00:00:16,526
I had this room setup
where I had all kinds

6
00:00:17,526 --> 00:00:19,636
of different structures
that I would build up.

7
00:00:20,346 --> 00:00:23,816
And then I would have all
my different lego guys

8
00:00:23,816 --> 00:00:24,826
interacting together.

9
00:00:24,826 --> 00:00:27,366
I would imagine this
whole world going on,

10
00:00:28,036 --> 00:00:29,406
as if it were real life.

11
00:00:30,216 --> 00:00:34,006
So I work on the hyper spectral

imaging here at NASA Glenn

12
00:00:34,316 --> 00:00:37,676
and we use an imager that
we built in-house to look

13
00:00:37,676 --> 00:00:38,916
at the algae in the lake.

14
00:00:39,116 --> 00:00:40,896
So when we fly over we
are collecting data.

15
00:00:41,386 --> 00:00:44,956
It use to take several
passes to look at the algae.

16
00:00:45,926 --> 00:00:51,266
So I worked on a system that
optimized our configuration

17
00:00:51,876 --> 00:00:53,276
to improve our field of view.

18
00:00:53,436 --> 00:00:55,186
To reduce the number of passes

19
00:00:55,186 --> 00:00:55,976
that we take to fly
over the lake.

20
00:00:56,146 --> 00:01:00,856
We had this old instrument, and
so I took it apart and I broke

21
00:01:00,896 --> 00:01:03,436
down what each component
did for that system.

22

00:01:03,946 --> 00:01:06,886
I looked at what was
commercially available

23
00:01:06,886 --> 00:01:08,536
to see how we could
upgrade that system.

24
00:01:09,336 --> 00:01:13,236
So we had a lens that we brought
in with a larger field of view.

25
00:01:13,936 --> 00:01:19,366
And then I bought a new camera
with four times the pixels.

26
00:01:20,006 --> 00:01:21,976
Then there was the
various configuration

27
00:01:22,296 --> 00:01:26,296
of the optics inside
that I reorganized it,

28
00:01:26,296 --> 00:01:27,956
in a way that it
was more efficient.

29
00:01:28,636 --> 00:01:33,696
I'm Roger Tokar, I grew
up in South Bend, Indiana.

30
00:01:33,886 --> 00:01:37,176
Even since a young age
I was asking questions

31
00:01:37,716 --> 00:01:39,966
when anybody was doing
something in front of me,

32

00:01:39,966 --> 00:01:44,386
I was wondering how it
worked, or what was going on,