It's the Milky Way as you've never seen it before! Two and a half billion infrared pixels are exposing our own Galaxy in this new image from NASA's Spitzer Space Telescope!	*Panorama vid*
[Titles]	*Opening titles*
Science is all about getting the big picture, but some pictures are definitely bigger than others.	*[host]* *uses camera*
You may have used your computer to make a large panorama yourself by stitching together a few shots from your camera. Depending on the camera the final picture may contain ten or twenty million pixels.	*Photos assembling into panorama*
Now can you imagine taking over 800,000 images and combining them into a single two-and-a-half billion pixel image?	*[host CU]* *Pan runs in the background*
Two teams of astronomers have not only imagined it… they've used NASA's Spitzer Space Telescope to make one. And it's online for everyone to explore.	*[host]* *Pan runs in the background*
Over 50 astronomers have worked on this massive project since the Spitzer mission began. This image combines data from two different legacy projects known as GLIMPSE, headed up by Dr Ed Churchwell and MIPSGAL, led by Dr. Sean Carey.	*Full-frame panorama*
The picture covers an area of sky as wide as your finger held out at arm's length, and as long as your open arms. That's about 2 by 130 degrees.	*[host]* *wide showing arms & fingers*

Though it sounds like a pretty small slice of the sky, it actually captures half of our entire galaxy! Our sun sits a ways out from the Galactic center, so a 130-degree arc takes in most of its area.	*[artist concept overhead view]*
And our Milky Way is very thin compared to its diameter, a lot like a CD. So even a 2° wide scan includes most of its disk.	*[host CU]* *holding a CD* *stars in bkg*
The rest of the stars that fill the sky are actually very close to us, filling just a tiny fraction of the disk right around our sun.	*[host]* *stars in bkg*
A space image this big takes a lot of space to show off. Spitzer unveiled this giant banner, 4 feet tall and 180 feet long, at the 2008 summer meeting of the American Astronomical Society in St. Louis! Since then it's been on display at the Adler Planetarium in Chicago, and at the Griffith Observatory in Los Angeles.	*b-roll of banner assembly*
The GLIMPSE part of the survey includes the shorter infrared wavelengths. At 3.6 and 4.5 microns we see blue stars that, in visible light, are completely hidden by dust. Carbon-based dust molecules show up at 8 microns, represented as green. MIPSGAL contributes the 24-micron component, rendered as red. This is the warm thermal glow from dust clouds heated by nearby stars.	*Close-up of segment showing blue, green, red components*
Together these observations give us a pretty complete view of stellar evolution, beginning to end, across our Galaxy.	*[host CU]* *galaxy overview backdrop? Super zoom?*

These ubiquitous dark filaments are dust clouds so dense they're opaque even in the infrared. They're dense enough to trigger gravitational collapse and form new stars. The red dots seen along these filaments are embedded protostars only barely seen at the longest, most transparent infrared wavelengths.	*Pan through filaments, highlight protostars*
Once the stars are fully formed and glowing from the heat of nuclear fusion, they illuminate, warm, and disrupt the surrounding dust, creating these dramatic structures near and far.	*Pan through SFR*
The stars eventually drift beyond their birthplaces mixing among their older cousins. This diffuse blue glow shows us the overall distribution of stars throughout the galaxy.	*Pan through MW and GC*
Eventually the most massive stars die in supernova explosions. We can see their expanding shock waves rich in newly forged heavy elements that will help form the next generation of dust and stars.	*Zoom in on SNR*
The GLIMPSE-MIPSGAL image is truly a pictorial guide to the past, present, and future of stars throughout our home galaxy. Astronomers will study the data for many years to come, and the observations will be a roadmap to guide future infrared observatories.	*[host]* *pan through background*

If you'd like to explore Spitzer's Milky Way yourself, all 2.5 gigapixels are available on our website. You can download the whole thing in segments, or use one of several web viewers that let you pan and zoom through the image interactively. Take a look; you might find something that no one else has seen!	*[host CU]* *Window showing zoomable interface* *Intercut with video from computer screen*
For the Spitzer Science Center I'm Dr. Robert Hurt, reminding you that there's a Hidden Universe just waiting for you to explore!	*[host]*