



# Partners HealthCare



- One of the Nation's leading Academic Medical Centers --



top ranked Mass General, Brigham & Women's, and Harvard Medical School among others

- Largest combined Bio-Medical Research Enterprise in the U.S. --
  - \$963+ million in annual research
- Educating the doctors of tomorrow
- Now, educating the public about scientific research



# Partners Goals

*Why we want to communicate science --*



- Extending our academic & educational mission –
  - ✓ Foster public understanding of neuroscience & biomedical research
  - ✓ Build on Partners' research strengths
  - ✓ Inspire youth today to become the scientists of tomorrow
  - ✓ Fuel Partners academic programs today & in the future
- Provide meaningful community service for greater Boston, the region & beyond





*Building on Partners' research strengths*



**WIRED TO WIN** reveals a decade of discovery made possible by new technologies...

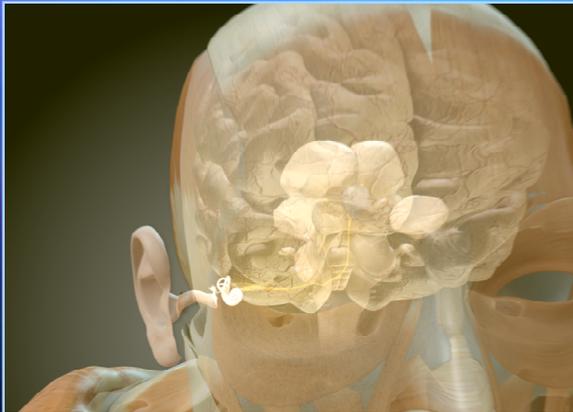
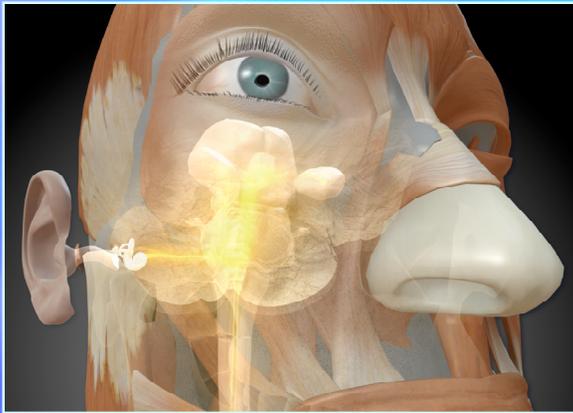


...imaging and computing technologies that can see deep into the brain at work.

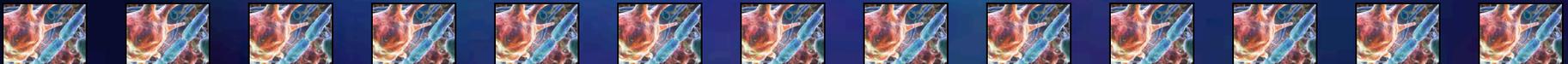


# Wired to Win

## A Comprehensive Public Science Education Project



- Exciting large-format (IMAX) film on the human brain
- National Symposia, Conference & Workshops
- Innovative Outreach & Educational Initiatives
- State-of-the-art Website
- *Wired to Win* Ancillary Materials -- DVDs, etc.
- Platform for public educational events
- Partners & Affiliates Public Presence & Community Service





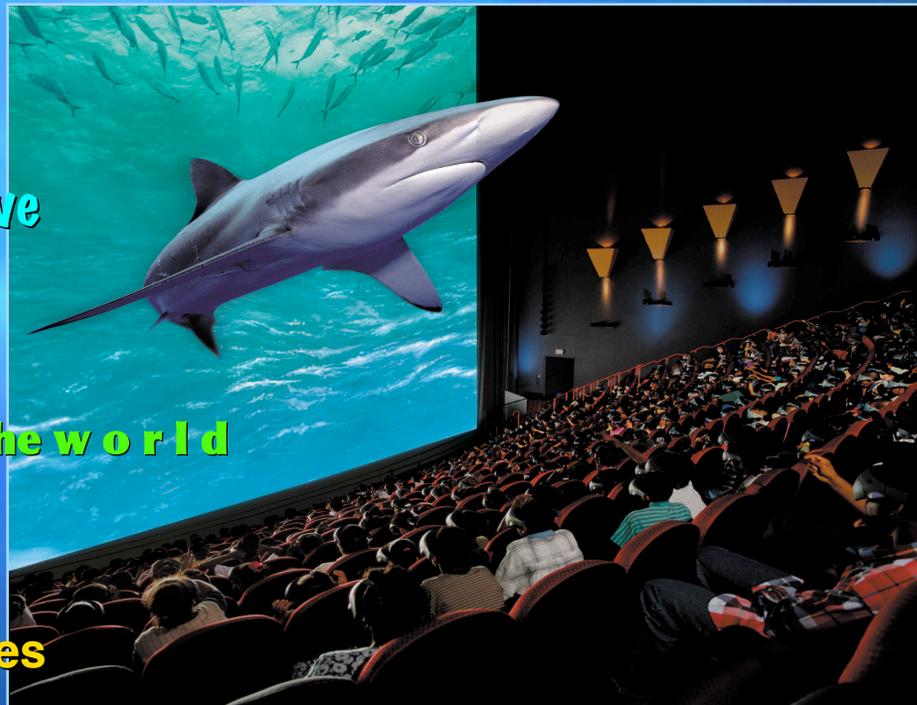
*HOW DO YOU HAVE AN IMPACT?*

*HOW DO YOU "WOW A CAPTIVE AUDIENCE"?*

*Consider the subject & the medium*

*IMAX:*

- *Visual power*
- *Immersive*
- *Emotional*
  - *Captures the world*
- *Short format*
- *Special venues*



*In the end, it's the story that counts...  
Serve the topic, medium & the audience*





# The Wired to Win film story

*Science through drama, character & the real world*



Explores how the brain works through the eyes of competitive cyclists

Reveals personal experiences & stories against a dramatic backdrop

Demonstrates how the brain is central to all we do & reveals key insights on:

.... Attention

...Memory

...Plasticity

...Fear

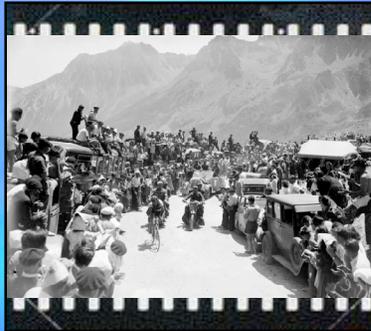
...Emotion

...Pain

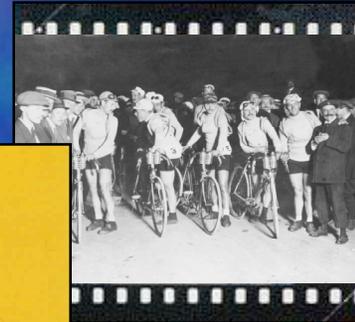




# The drama & real world



The 2003 Tour de France...



...the historic 100<sup>th</sup> Anniversary of this legendary event





## The drama & characters

The remarkable story of the power of the human brain...



Told through the eyes and experiences of world class athletes

Baden Cooke  
and  
Jimmy Casper



in the centenary TOUR DE FRANCE





## *THE TOUR DE FRANCE – DAY ONE – JULY 5TH*



*A 50-person film crew has prepared for months. How will the story unfold?  
How do we seamlessly weave real events as they happen & our science story?*



*THE TOUR DE FRANCE*

*DAY TWO, JULY 6TH...*

*The Crash. . . .*

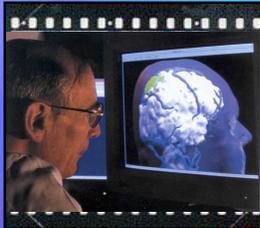


# The Crash. . .

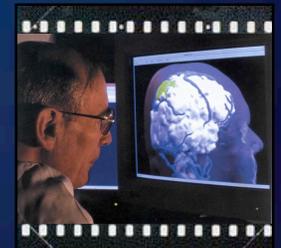
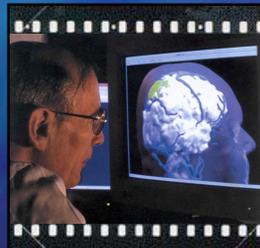
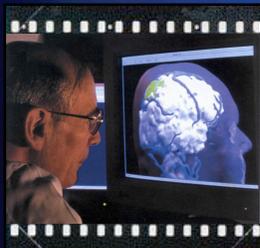




The Tour & Science stories unfold  
JIMMY & THE CRASH... and imaging technologies that



allow us to treat injuries & see deep into the healthy brain...  
charting its structure & "wiring" of neuronal networks





# Integrating the human & science stories MRI imagery and the neuronal networks of the brain

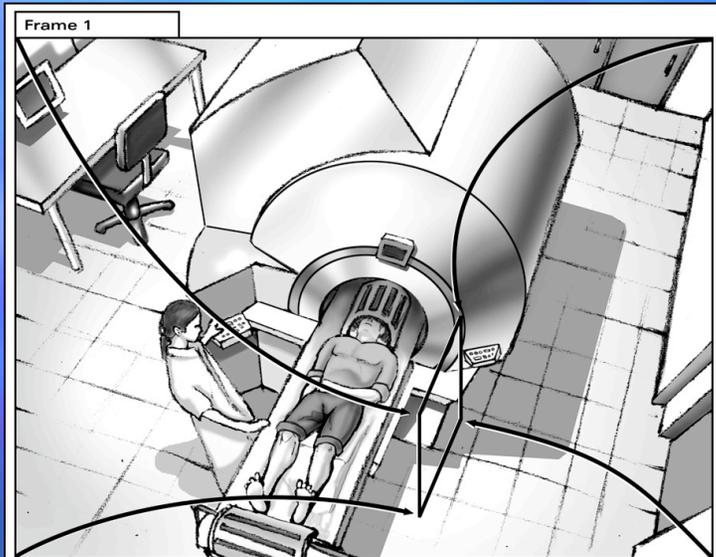
The Tour...  
the crash...  
Jimmy...



...& building  
neuronal networks  
through CGI...  
Drama & science combined...

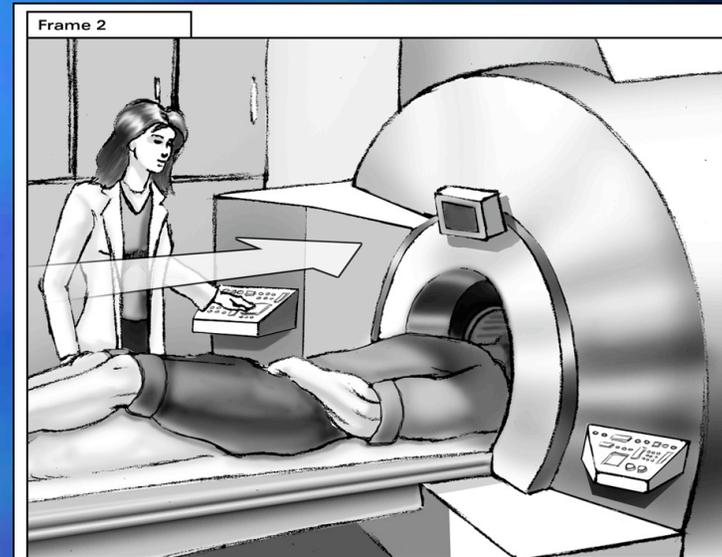


# MRI imagery and the neuronal networks of the brain



**Action**

High-angle shot looking down on young male patient (Tour rider, TBD) being moved into state-of-the-art fMRI machine. Female doctor stands next to him, monitoring the process, giving instruction as appropriate.



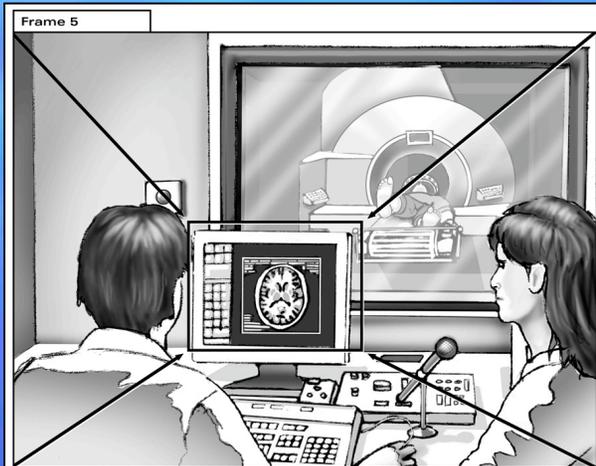
**Action**

After a few seconds, camera CRANES down and TRACKS left. As it reaches level of the supine patient's legs, we look into the tunnel-like cavity of the MRI and see his head and shoulders move well inside it.





## MRI imagery and the neuronal networks of the brain

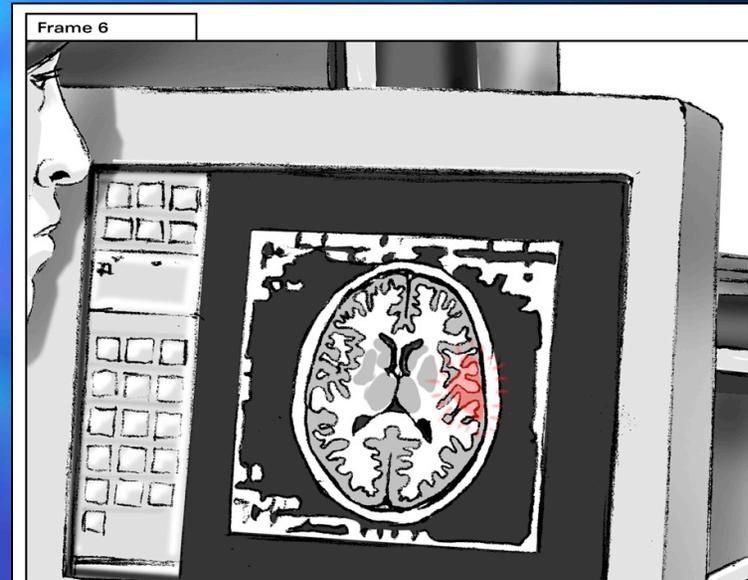


### Action

We see MRI machine and lower half of patient's body through the window. Camera tracks closer to computer screen as black-and-white scan of brain in profile slowly appears. As instructed by one of doctors on the intercom, the patient raises one of his legs a few inches.

### Dialogue

NARRATOR: fMRI is one of new tools of discovery in neuroscience, revealing the brain in action...etc.



### Action

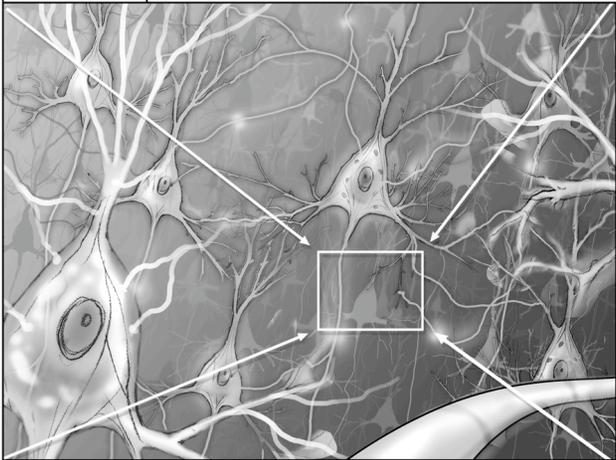
CUT to a succession of full-screen 7 Tesla (high-res) fMRI scans of the brain, (or "movies") each showing different areas of activation in the cerebral cortex (e.g., motor cortex)...





## MRI imagery and the neuronal networks of the brain

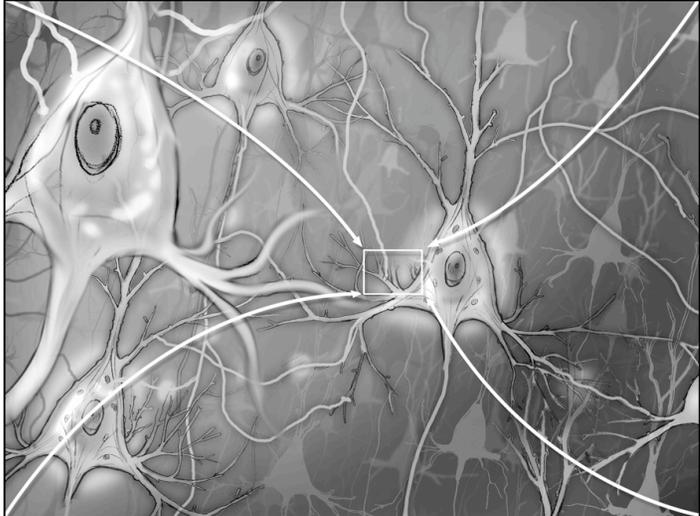
Frame 13



**Action**  
The image of the legislature fades out as the CGI camera closes in on a network of neurons firing in what appear to be regular patterns. Zoom in towards background neurons.

**Dialogue**  
NARRATOR: Like congressional committees, networks of neurons are always being formed to deal with new experience - like learning to ride a bike or dealing with an injury.

Frame 14

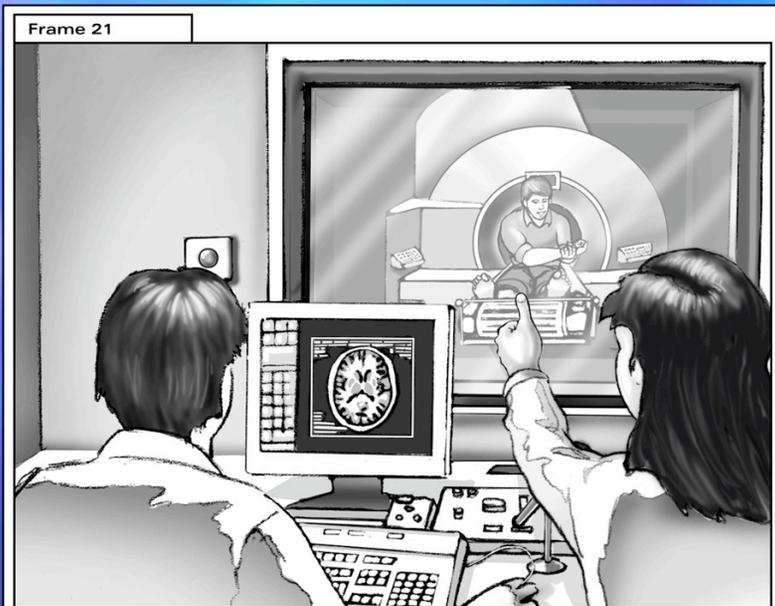


**Action**  
Now we fly closer to a tree-like neuron and see it engage in a kind of electrical call-and-response with other neurons in the background and get a glimpse of its myriad connections to neighboring neurons. Zooming to synapse fly-by. We also see a pattern emerging in the synapse firing between foreground neurons.





## MRI imagery and the neuronal networks of the brain



### Action

CUT to POV of the neurologist in the control room giving the young cyclist the thumbs up through the window. Cyclist sits up and begins to flex his arm.



### Action

CUT to POV of the young cyclist flexing his arm. We hear her voice over the intercom.....

### Dialogue

Neurologist: Bon, écoutez, Jimmy, c'est termine. Tout va bien. Allez, mon ami!

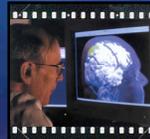




## Integrating the human & science stories



From the inner to the outer world  
and back to Jimmy, Baden & the Tour...





The Tour provides the science opportunities, for example...

## The Brain and Fear

- A hairpin turn on a high speed descent out of the Alps
- Beloki's tire explodes...he's hurled to the ground
- The terrifying sound of the crash...and in a snap, the riders' brains are on high alert
- Armstrong & the peloton --the brain's pathways of fear & the immediate "fight or flight" response
- Armstrong's split second decision . . .





The Tour provides the science opportunities, for example...

# The Brain's "Legislature of Attention"

- The grueling finish at Luz-Ardiden
  - A fan's purse tangles in Lance's bike
  - He's down with Mayo right behind
- 
- How does the brain filter out the non-essential?
  - How do you focus on what's important?
  - The brain's own "Legislature of Attention" in action!

objects

location  
LOCATION  
LOCATION

...movement >>>



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Faces

January 19-21, 2007  
Save the Date!

Boston, Massachusetts  
Westin Copley Place Hotel

Information at:  
[www.scienceandsocietyconference.com](http://www.scienceandsocietyconference.com)  
617-724-7299

Free Registration

# SCIENCE + society Closing the Gap



A conference and open dialog  
addressing the critical need for  
improved communication between  
the scientific community and  
the general public.

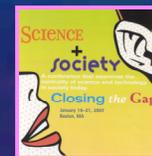
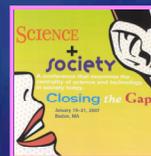
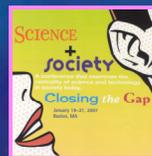
A Partners HealthCare project, sponsored in part  
by Ortho-McNeil Neurologics, Inc.



## Science + Society conference

January 19-21, 2007, Westin Hotel, Boston

- From the Wired to Win case study to more universal considerations
- International conference on science & science communications
- Bringing together the public & professionals
- 1st session examines science in global issues
- Extends to science communications across all media platforms



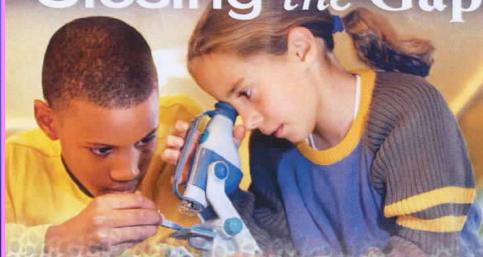
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## Science + Society conference

January 19-21, 2007, Westin Copley Place Hotel, Boston

**citizens and SCIENTISTS in Sync** The future of our planet depends increasingly on science, yet people have become alienated from it. How can we meet the challenge of closing the gap between scientists and the public? This international meeting brings together scientists, communicators, educators, and the public to share ideas about how to address one of the greatest challenges facing our society today.

**Science centers, museums, schools, colleges:** what are the most effective ways to encourage visitors and students to engage with the big issues of modern science and technology?

**TV, movies, internet, journalism:** how can science be better integrated into the content of mass media?

**Scientific community, citizens:** how can the public more effectively be involved in supporting the scientific enterprise?

**Government:** how can government make better decisions about the most pressing issues of science and technology?

for updates and information about speakers, sessions, and hotels:  
[www.scienceandsocietyconference.com](http://www.scienceandsocietyconference.com) or call 617-724-7299

*There is no fee to attend the conference, but space is limited, so sign up now!*

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