



# Test Generation from UML Specifications

by: **Michael A. Gray,**

Associate Professor at American University, Washington, DC.

**Thursday, March 23, 2006**

American Society for Quality (ASQ) — Washington, DC & Maryland Metro Section  
Software Special Interest Group (SSIG)

A Unified Modeling Language (UML) system specification provides an opportunity to generate both system-level and unit-level tests from relatively precise semantic information. This talk will explore the possibilities inherent in UML for test generation.

We begin with an overview of UML and the semantics of the various components of a UML specification. Following this, we discuss the location of system-level and unit-level test generation information in the specifications and end with a survey of current uses of UML for test generation.

**Presenter:** **Michael A. Gray** is an Associate Professor at American University, Washington, DC, and has been a member of the faculty since 1990. He is currently teaching computer science in the Department of Computer Science, Audio Technology, and Physics. He received his PhD from Pennsylvania State University in 1968, and was employed about 15 years at Control Data Corporation in system design, followed by four years in research at MCC in Austin, Texas. He has been working in object-oriented analysis and design for more than a decade, offering the first courses in UML and Java on campus about ten years ago.



## This Meeting Will Be Held at 3 Locations!

The MITRE Corporation  
7515 Colshire Drive  
McLean, VA

FDA Tech. Center  
16071-B Industrial Drive  
Gaithersburg, Maryland

The MITRE Corporation  
260 Industrial Way West  
Eatontown, NJ 07724

Driving directions and maps for all three facilities are provided below. There will be two-way video-audio conferencing between the locations. All locations will have food. Please indicate which location you will be attending when you register.

**Sponsored By:** The American Society for Quality (ASQ), Washington DC & Maryland Metro Section (509), Software Special Interest Group (SSIG). Members of the ASQ SSIG include software quality professionals, software engineers, and others interested in applying quality principles to the field of software development. See our web page: <http://www.asq509.org/ht/d/sp/i/2499/pid/2499>  
We meet every other month, at the FDA Tech Center near Gaithersburg, Maryland and/or the MITRE facility in Tyson's Corner, Virginia.

**Registration:**

Please register for the meeting by COB Monday, March 21, 2006 by contacting Scott Ankrum at [ankrums@mitre.org](mailto:ankrums@mitre.org) or 703-983-6127 for the Maryland and Virginia sites, or contact Richard Eng at 703-578-6352 or [reng@mitre.com](mailto:reng@mitre.com) or for Eatonton, NJ. Please include your company affiliation, your citizenship, and at which location you plan to attend. You do not need to be an ASQ member to attend.

There is no cost to attend. Pizza and soda will be served.

**The Meeting Is Scheduled For:**

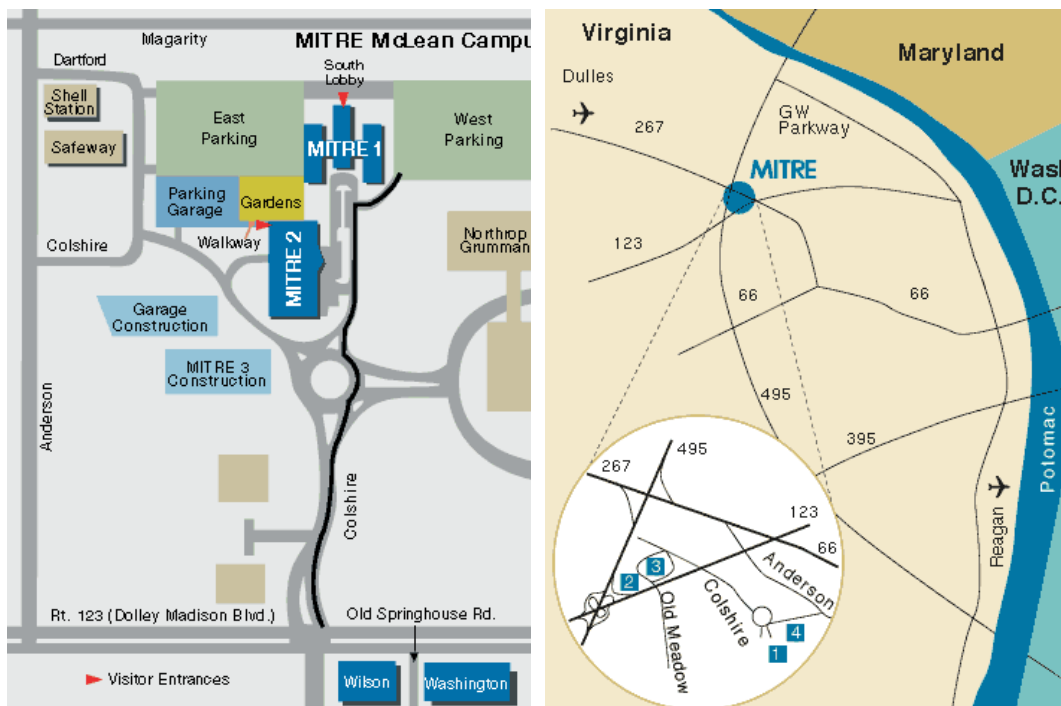
Thursday, March 23, 2006  
6:30 - 7:30 Pizza and Sodas  
7:30 - 8:30 Program

**Will Be Held At:**

MITRE building 2, McLean, VA  
MITRE Eatonton, NJ  
FDA Tech. Center, Gaithersburg

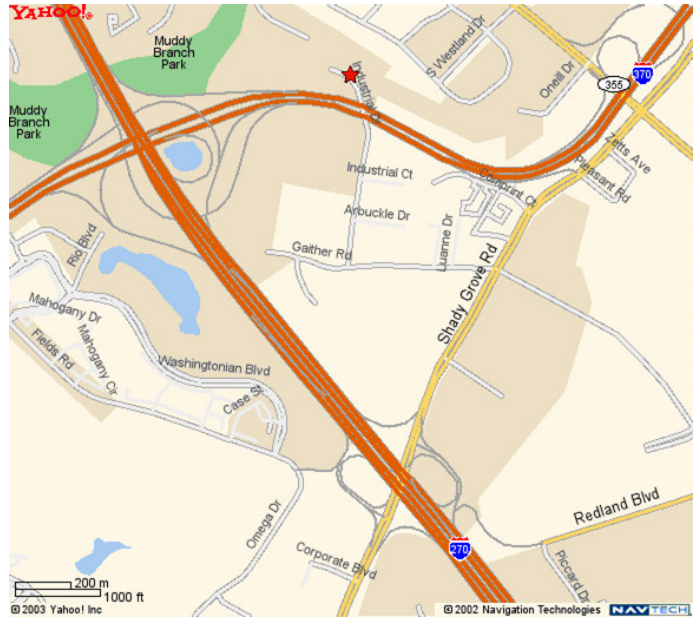
**Directions to the MITRE Facility in McLean, Virginia:**

Take the Beltway, I-495 to Virginia. Take Exit 46B (McLean, Route 123). Take Route 123 North, (also called Dolley Madison Blvd.) and go to the second traffic light at Colshire Drive. Turn right on Colshire Drive and continue through circle on Colshire. Drive around the back of the building to the East (left) parking lot. The entrance is past the fountain, on the left. Additional directions can be found at: [http://www.mitre.org/about/locations/mitre1\\_map.html](http://www.mitre.org/about/locations/mitre1_map.html)



### Directions to the FDA Tech Center in Gaithersburg, Maryland:

From I-270 N or S, take Shady Grove exit east and proceed to Gaither Road. Turn LEFT on Gaither and proceed to first stop sign. Turn Right on Industrial Drive. You will cross over I-370. Go to the large Industrial building at the end of Industrial Drive and bear left to the end of the building. The meeting will be at the FDA Tech Center, 16071-B Industrial Drive, Gaithersburg, MD.

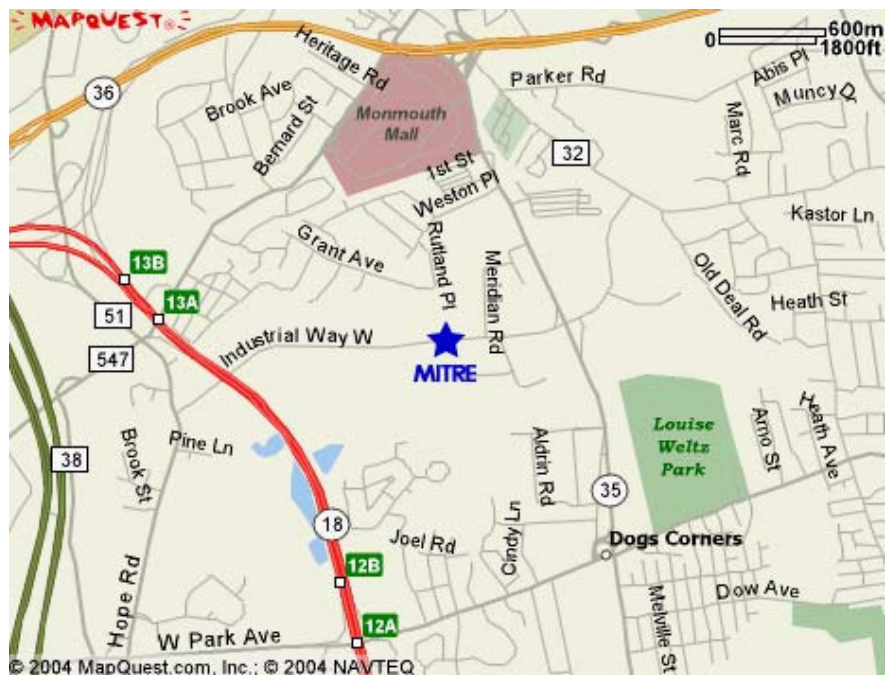


From Route 355 (Frederick Rd), take Shady Grove West and proceed to Gaither Road. Turn RIGHT on Gaither Road and proceed to first stop sign. Turn Right on Industrial Drive. You will cross over I-370. Go to the large Industrial building at the END of Industrial Drive and bear left to the far end of the building. The meeting will be at the FDA Tech Center, 16071-B Industrial Drive.

### Directions to the MITRE Facility in Eatontown, New Jersey:

#### From the New Jersey Turnpike

If traveling from the **SOUTH**, get off the Turnpike at Exit 7A (195 toward Shore Points). Take 195 East towards the ocean and shortly after 195 turns into Route 138 (approximately 35 miles) watch for Route 18 North (Eatontown). Take Route 18 North to Exit 13A (Wayside West/Wyckoff Road). At end of ramp, bear left. At first traffic light (Hope Road) make a left turn. Make second left turn onto Industrial Way. The MITRE Corporation is next to the First Atlantic Credit Union on the left hand side of Industrial Way. There is a MITRE sign out front. There are two buildings on the left side of Industrial Way. The first building is MITRE, the second building is TYCO. Take a left turn into the parking lot of the first building (which is MITRE) and head around to the back of the building. Our main entrance is there. There is a MITRE sign above the door.



If traveling from the **NORTH**, get off the Turnpike at Exit 11 (Garden State parkway exit). Follow the Garden State Parkway until Exit 105 (Eatontown). Follow the directions from the Garden State Parkway below.

### **From the Garden State Parkway**

Follow the Garden State Parkway from the North or from the South to Exit 105 (the exit numbers increase going from south to north). After paying the toll at Exit 105, make first right turn onto Hope Road. Follow Hope Road to Industrial Way (second left turn after crossing Wyckoff/Shafto Road). Make second left turn onto Industrial Way. The MITRE Corporation is next to the First Atlantic Credit Union on the left hand side of Industrial Way. There is a MITRE sign out front. There are two white buildings on the left side of Industrial Way. The first building is MITRE, the second building is TYCO. Take a left turn into the parking lot of the first building (which is MITRE) and head around to the back of the building. Our main entrance is there. There is a MITRE sign above the door.