

#1: Visibility of system status

- **The system should always keep users informed about what is going on, through appropriate feedback within a reasonable time.**

#1: Visibility of system status

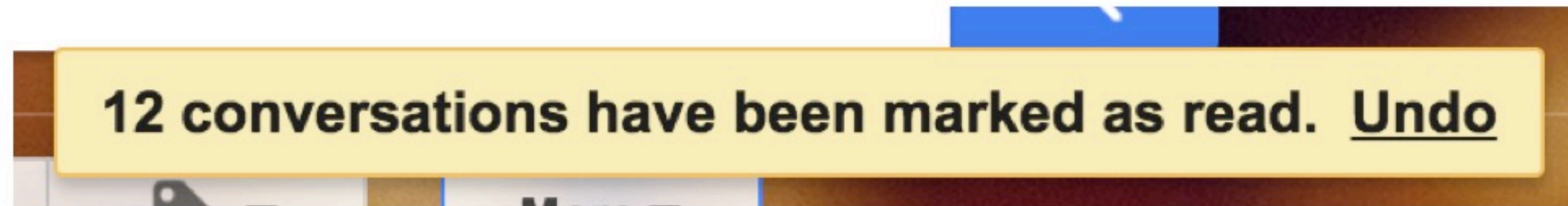
- **Why?**
- **Knowing what actions are available bridges the Gulf of Execution**
- **Knowing how the system responded bridges the Gulf of Evaluation**
- **Echoes Norman's principles of Feedback and Constraints**

#1: *Visibility* of system status

- **Feedback**

#1: Visibility of system status

- Feedback

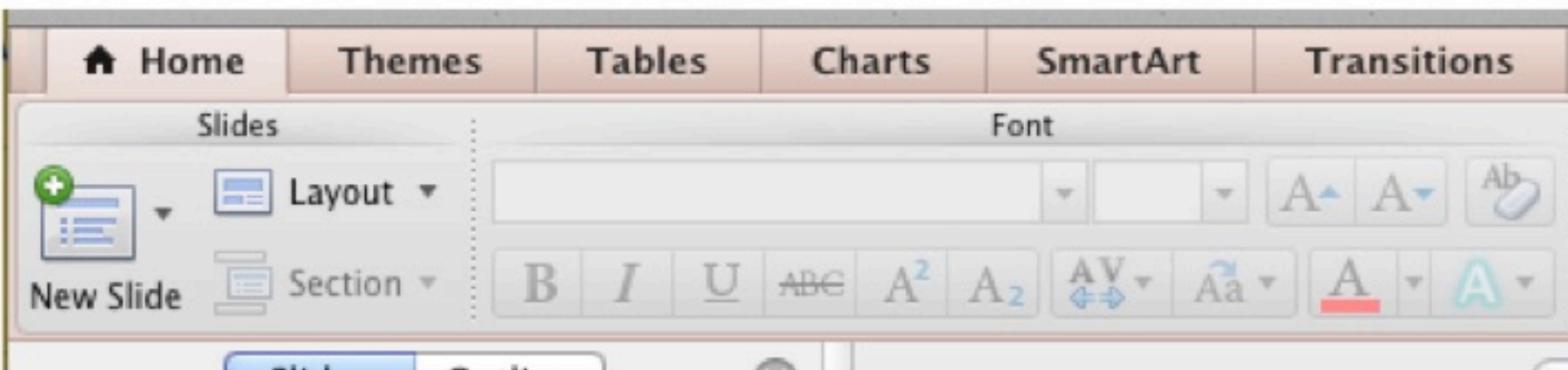


#1: Visibility of system status

- Available actions



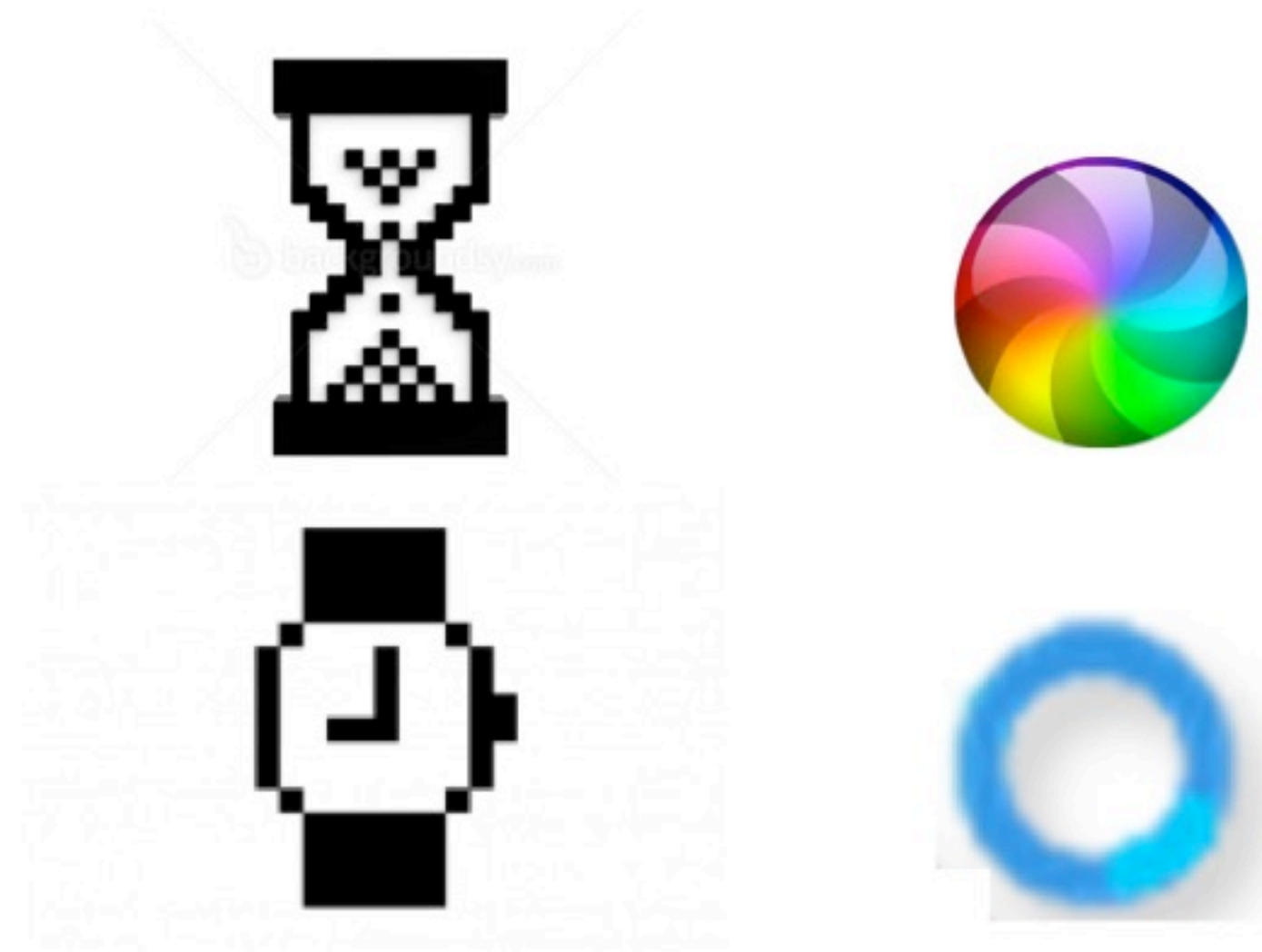
When text is selected



*When no text is selected
(controls disabled)*

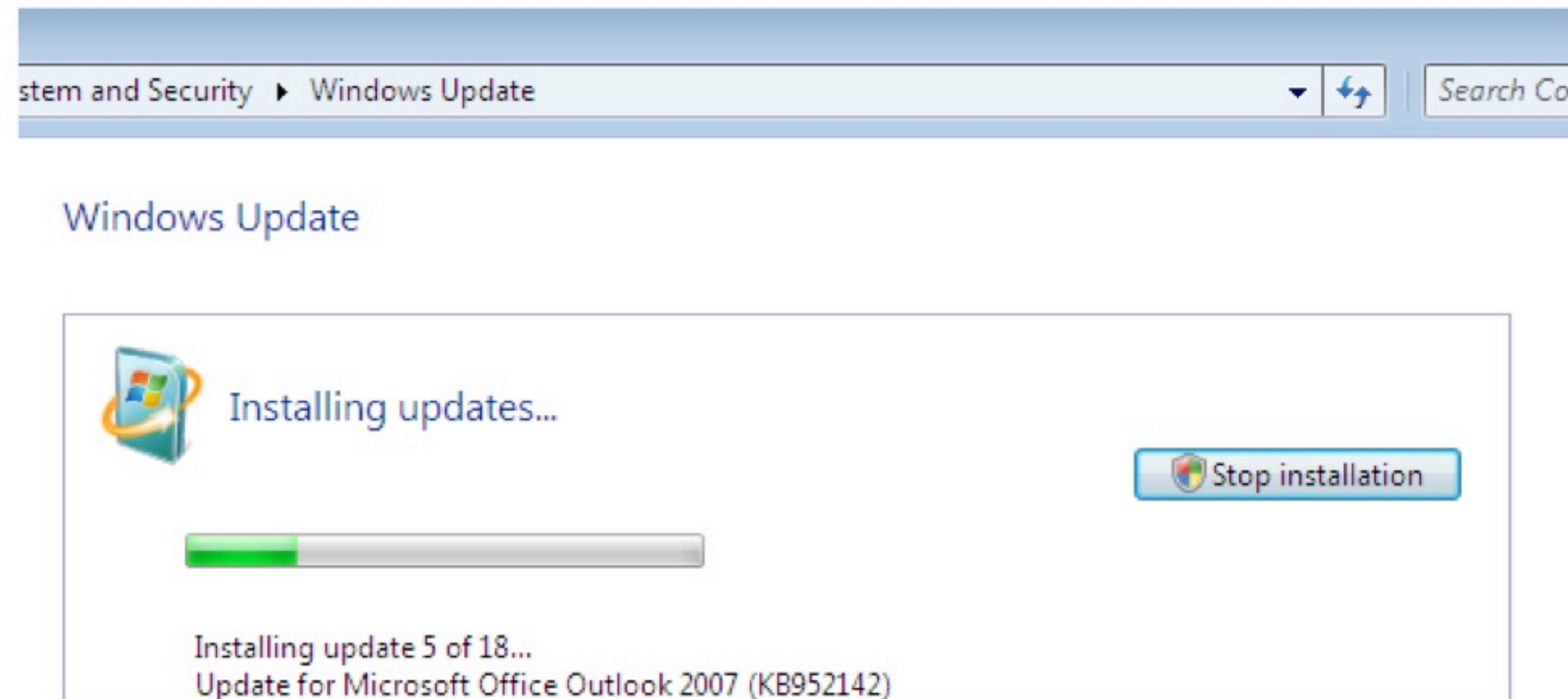
#1: Visibility of system status

- General availability



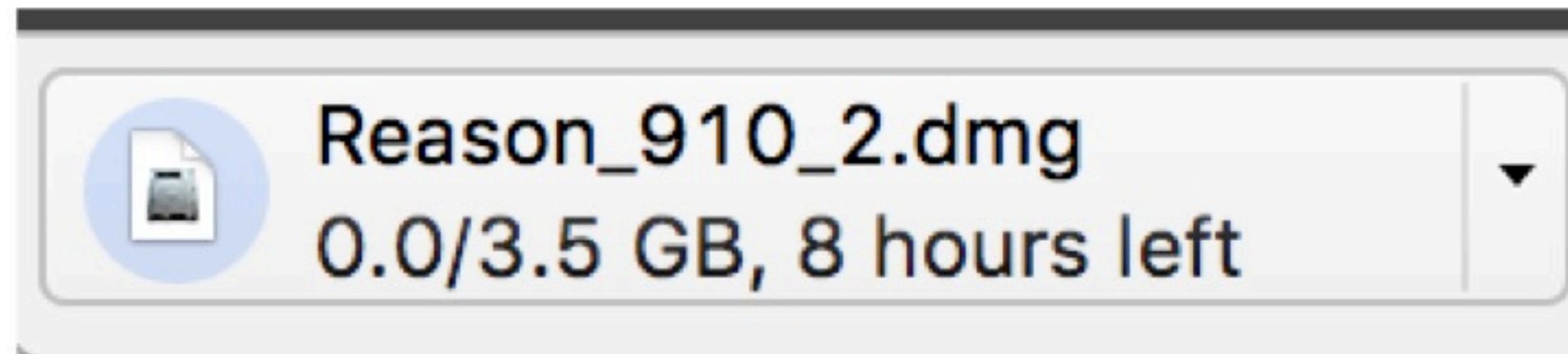
#1: Visibility of system status

- **General availability**



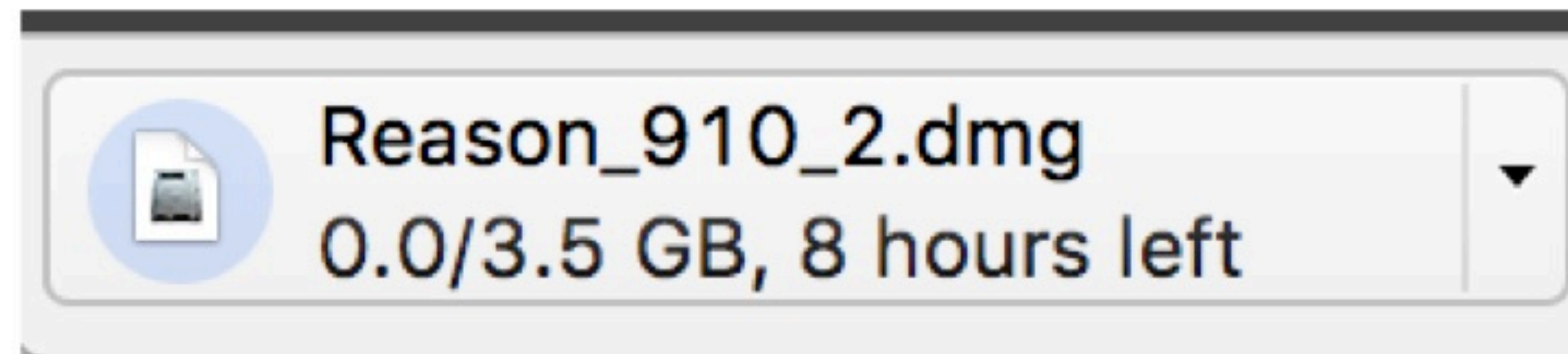
#1: Visibility of system status

- General availability



#1: Visibility of system status

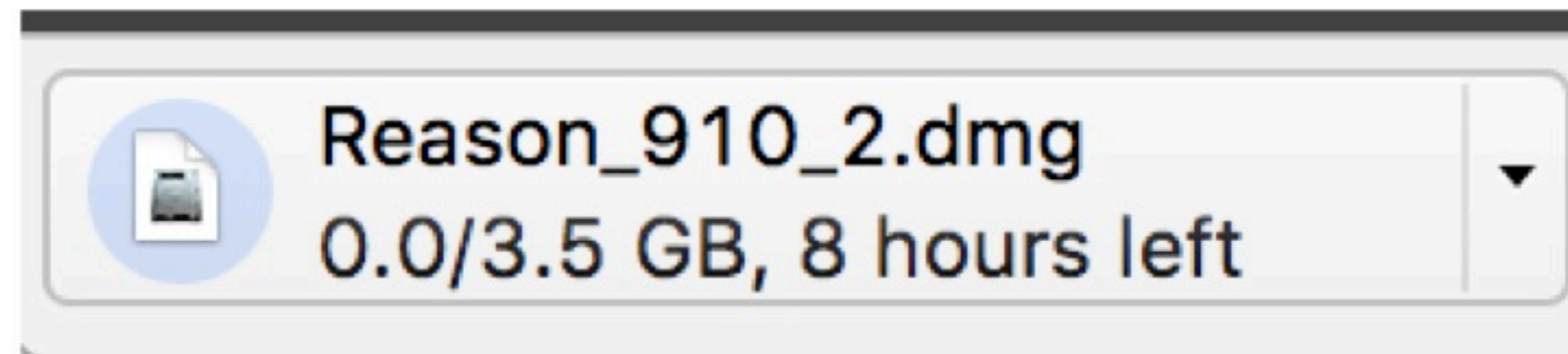
- **General availability**



- ***How users react to delay***
 - **Less than 100 milliseconds: “instantaneous”**
 - **Up to 1.0 second: tolerable, but delay noticeable**
 - **Up to 10 seconds: annoying, but willing to wait**
 - **More than 10 seconds: focus lost, on to something else**

#1: Visibility of system status

- **General availability**



- ***Design guidelines***
 - **Strive for <100 msec response time**
 - **Up to 1 second, no indicator needed**
 - **From 1 to 10 seconds, use wait cursor**
 - **Over 10 seconds, complete in background, use progress indicators and estimates**