

# THE PRACTITIONER

A monthly newsletter of the Energy Facility Contractors Group's  
Project Delivery Working Group



Issue 50

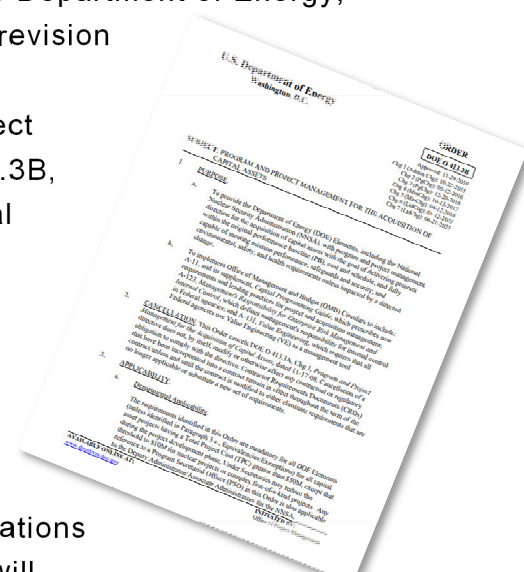
September 2023

## Updating DOE Order 413.3b

Greetings Energy Facility Contractor Group (EFCOG) Project Delivery Working Group (PDWG) Practitioners! As we near the end of another productive fiscal year (FY), we are preparing for an upcoming busy year with plenty of opportunity for our team to contribute to the success of our individual clients and our corporate client at the Department of Energy, Headquarters. Our first opportunity to contribute will be in the revision of DOE O 413.3B.

On August 15, 2023, Paul Bosco, Director of Office of Project Management, provided approval to update DOE Order (O) 413.3B, Program and Project Management for the Acquisition of Capital Assets.

DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, was approved and published in 2010. Since its approval, a series of seven limited changes have been made; most of the changes incorporated Secretarial policy direction. The Office of Project Management (PM) has received numerous requests for clarifications and improvements to the order – this revision of the directive will address those concerns. Some of the topics to be addressed include:



- Reviewing the gap between the minor construction threshold and the DOE O 413.3 applicability threshold
- Clarifying the equivalency / exemption process
- Refining, tailoring, and providing streamlined requirements for non-nuclear, non-complex, commercial-type projects in a new Appendix to the Order
- Clarifying CD-3A / 3X requirements and limitations of incidental site preparation

The Office of Project Management (PM) will use the DOE O 413.3B Project Management Governance Board (PMGB), and up to three members each nominated by the EFCOG PDWG and the Laboratory Operations Board (LOB), to act as an advisory board for providing recommendations and resolving major issues and comments.

Prior to submitting the order for general review and comment, PM will develop a draft internally to address comments already received, corrective actions gleaned from project management lessons learned, and responding to recommendations from the PMGB, EFCOG PDWG, and LOB.

This action will be part of our FY24 Annual Work Plan.

# Inside the Project Definition Rating Index

**A**lso, this month we take a focused look at one of the most important tools available to Project Managers everywhere...the Project Definition Rating Index (PDRI) Guide for Traditional Nuclear and Non-Nuclear Construction Projects as described in DOE G 413.3-12.

There may be no other more valuable “front-end planning” tool in the Project Manager’s tool kit than the PDRI. This Guide assists individuals and teams involved in conducting assessments of project definition. The PDRI is a simple but powerful tool that facilitates the measurement of the degree of scope definition for completeness for traditional construction projects (nuclear and non-nuclear).

The PDRI is a project management tool designed to increase the likelihood of project success by improving project scope definition, specifically by identifying deficiencies in scope definition early during the front-end planning process.

As one of the corrective measures to improve front-end planning within the DOE Project Management Process, DOE proposed the development and implementation of tailored PDRI models by their programs similar to the Construction Industry Institute (CII) PDRI. (References: DOE, Root Cause Analysis, Contract and Project Management, Corrective Action Plan, July 2008; and CII, PDRI for Buildings Projects, Implementation Resource 155-2, Second Edition, 2006).

DOE G 413.3-12 provides a tailored model of the CII PDRI for traditional construction projects for use by the DOE programs, as it may apply and is appropriate, when reviewing the levels of adequacy of project scope definition during the project development stages. The PDRI should be used during front-end planning that encompasses the project activities from pre-conceptual design through final design.

The PDRI tool in this Guide based on a score of 1-1000 assists project reviewers in measuring the level of project definition at a given project phase. The higher the score in this scale, the higher the level of project definition is.

The National Nuclear Security Administration (NNSA) developed its own tailored version of the CII PDRI very similar to the EM PDRI for traditional construction projects (January 2009).

The principal purpose of the NNSA PDRI is to assist Integrated Project Teams (IPTs) by identifying key engineering and design elements that are critical to a well defined scope at various phases of the project. The NNSA PDRI is expected to assist the IPTs in identifying staffing requirements at each project phase; reporting progress on project definition at Quarterly Progress Reviews (QPRs); assessing readiness for Internal and External Project Reviews; and supporting the Acquisition Executive in approving Critical Decisions.

## THE PRACTITIONER

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# PDRI

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## **What is the PDRI?**

The PDRI model used in this Guide is a simple and easy-to-use tool for measuring the degree of scope development for traditional construction projects (nuclear and non-nuclear) within DOE. The PDRI used in this Guide offers a comprehensive list of 73 scope definition sub-elements within five key major elements for project planning. These major key elements are (1) Cost, (2) Schedule, (3) Scope/Technical, (4) Management Planning and Control, and (5) Safety.

Each sub-element within the major key element it belongs to is weighted on its relative importance to the other sub-elements. A scoring scheme through the project stages of development allows the users to evaluate the state of completeness of scope definition at any point prior to detailed design and construction; and where the scoring is low, to quickly predict factors impacting project risk. Since the PDRI score relates to risk, those areas (sub-elements within the major elements, such as safety) that need further work can easily be identified. It is recommended in this Guide that a scoring of 900 or better be used for the suitability of a project proceeding to Critical Decision-2, approval of project baseline.

## **When to Use the PDRI**

This PDRI Guide is intended to be used during front-end planning, which encompasses all activities from pre-conceptual, conceptual, preliminary leading to final design in a project.

With goals of significantly improving up-front planning, including integration of safety early into the design process, there is a major emphasis on the extent of project definition in the conceptual design phase of the project that includes Critical Decision-1 (CD-1), approval of alternative selection and cost range.

By CD-2, approval of project baseline, the project scope definition should be essentially complete. Also at CD-2, the cost and schedule are established in the performance baseline which requires independent validation per DOE O 413.3.

The importance of a well defined project scope at CD-2 is highlighted by the DOE O 413.3 expectation that the approved performance baseline for technical scope, cost and schedule will not be exceeded.

## **Benefits of Using the PDRI**

Effective front-end planning improves project performance in terms of both cost and schedule, reinforcing the importance of early scope definition and its impact on project success. A significant feature of the PDRI is that it can be utilized to fit the needs of almost of any individual project, small, or large.

Sub-elements that are not applicable to a specific project should be marked N/A and have their weighting factor reduced to zero. The weighting of the remaining sub-elements within that major key element (e.g. Cost, Schedule, Scope/Technical, etc.) should be readjusted by spreading the weighting factor of the deleted sub-element proportionally over the remaining

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weighting factors of the remaining sub-elements so as to maintain the same potential maximum score of 1000.

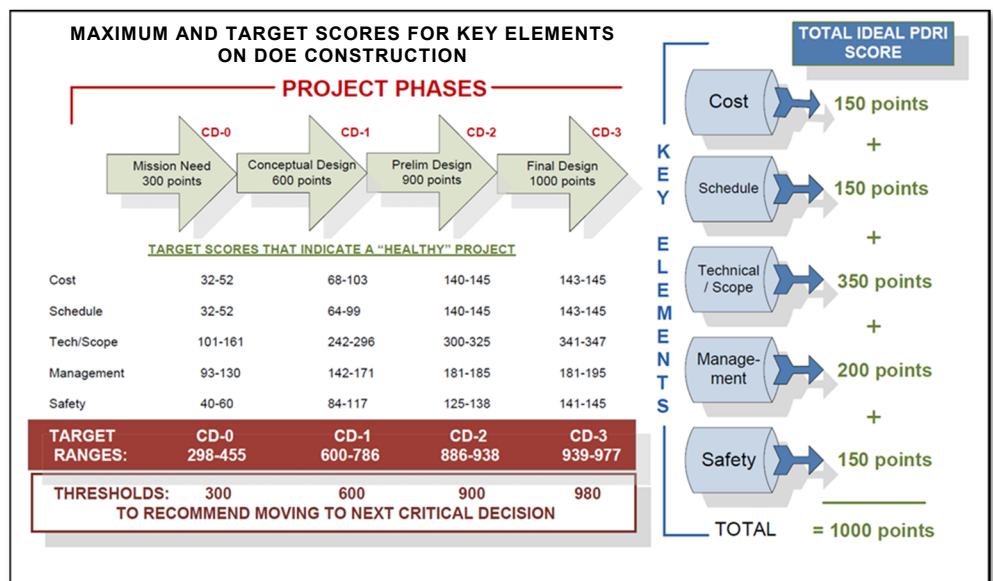
The PDRI is simple to use and can serve as a best-practices tool that can provide numerous benefits to the evaluators, including:

- A checklist that can be used for determining the steps to follow in defining the project scope.
- A standardized terminology of sub-elements that comprise the scope definition for the project under evaluation, as it may apply and considerate appropriate (programs may expand or tailor their version of the sub-elements for scope definition).
- An industry standard for rating the completeness of the project scope definition to facilitate risk assessment and prediction of escalation, and evaluation of the potential for disputes.
- A means to monitor progress at various stages during the front-end project planning effort and to focus efforts in high-risks areas that need definition.
- A tool that aids in communication and promotes alignment between the owners and design contractors by highlighting poorly defined areas in a scope definition package.
- A means for project team participants to reconcile their differences using a common basis for project evaluation.
- A benchmarking tool for interested parties to use in evaluating the completion of scope definition versus the probability of success on future projects

The PDRI can benefit facility owners such as DOE, as well as designers and constructors. DOE programs and planners can use it as an assessment tool for establishing a comfort level at which they are willing to move forward with projects. Designers and constructors working with DOE can use it as a method of identifying poorly defined project scope definition elements/sub-elements.

The PDRI provides a means for all project participants to communicate and reconcile differences using an objective tool as a common basis for project scope evaluation.

Hopefully this PDRI appetizer has left you wanting to learn more, given there is no down-side to using this great tool. If you would like the full content of the DOE G 413.3 -12, go to the EFCOG PDWG website and access the EFCOG Training Express, where you have a choice of a [detailed Power-Point presentation](#), or a [summarized Visio PDF version](#) of the full content.



# **It Is Not One World**

## **The meaning and importance of culture for project success**

*CONFERENCE PAPER Quality Management, Organizational Culture 2007*

*By Lawrence V. Suda*

### **Introduction**

A strong culture shapes an organization's decision patterns, guides actions, and drives individual behavior of all members. In its most obvious form, it is "The way we do things around here to succeed." In its less visible form, it encompasses the shared beliefs, norms, symbols, values, attitudes that permeate all parts of the organization. These enduring patterns help provide stability – an important benefit – for the organization. But, a strong culture can also erect barriers to getting the results needed to remain competitive. Culture is potent. It can block an organization's (or project) strategy or catalyze it.

Project leaders who lack cultural awareness can become restricted and handicapped by the values and beliefs of the base organization's culture. They can have difficulty understanding and adapting to different norms and behaviors across the organization. By contrast, enlightened project leaders have a strong connection to their cultures. They are more sensitive and capable of interacting with other kinds of cultures and are more adaptable, flexible and effective. This paper discusses what organizational culture is and is not and how it influences behavior. Our purpose is to help project leaders gain a better understanding of organizational culture, its underlying process, how it develops, identify the characteristics of the core culture types, how to develop ways for recognizing, changing and adapting to their own behavior while working with dissimilar cultures. This knowledge can help project leaders become more effective and get the planned project results. It also discusses ways to describe culture, the attributes of the "Core" culture, and the critical link between strategy, culture and leadership behaviors. This paper is grounded in theory and is both descriptive and prescriptive and offers some suggestions that can help project leaders understand their culture and that of others and is an aid to making projects more successful.

### **What is Organizational Culture?**

Basically, an organization's culture is its personality. It's comprised of assumptions, beliefs, values, norms, and tangible signs (artifacts) or organization members and their behaviors. Culture is a very powerful force and is multidimensional. The same person placed in different organizations (or parts of the same organization) would act differently, because a strong embedded culture creates social ideals that guide individual behavior. These ideals are

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# Culture and Project Success

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manifested in a number of ways. A strong culture can generate commitment to the organization's values. In high performing organizations (Collins & Porras 1998) strong cultures endure and are a means by which organizations can strengthen their performance, adapt to change and changing environments while increasing their chances of survival and maintaining their competitive performance. Culture is a means by which messages about what the organization stands for is conveyed to employees and other stakeholders. When individuals become committed to the organization's beliefs, those beliefs become internalized and individual members hold them as their personal beliefs. Whether we as individuals are aware or not, the internalization process occurs and, if congruent, can be a means of personal satisfaction. In other words, our organization's personality becomes our personality and vice-versa.

Understanding the culture of your organization is critical to running successful projects. Culture resides in every fold of an enterprise, influencing the dynamics of how people perform, relate and perceive the organization's impact on their lives. The organizational psychologist Edward Schein defined organizational culture as "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems." (Schein, 1992, p34)

Schein's definition is insightful. Shared assumptions are the heart of any culture. It references problem solving and adaptation, which differentiate organizational culture from other types of cultures not bounded to business. Finally, it highlights the generational nature of culture, recognizing that succeeding groups of organization members learn about culture from the current generation.

## **What Internal Forces Shape Culture? The Link between Strategy, Culture, Leadership and Performance**

Powerful external and internal forces shape an organization's culture that impact projects.

The vision, mission, strategy whether well conceived and communicated or not are played out by the organization. For example, in some organizations like Southwest Airlines every employee can tell you precisely the organization's strategy. And, it has a profound impact on the success of that organization's culture and performance. Some organizations have as their strategy to dominate the marketplace and have the only product, technology or service and strive toward maintaining stability. Others strive to have the most superior products or services and are extremely adaptive.

Structure affects culture. For example, rigid, formal and command and control structures can promote functional efficiency at the expense of collaborative innovation (projects). Within the structure of the organization subcultures typically exist. Subcultures grow out of different locations and occupations and the provision of services. Even within the same organization, subcultures may be starkly different from the base organization's culture. For example, the marketing

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department may embrace values even more fervently than the base culture, whereas the research department may challenge dominate “command and control” values of the corporate culture.

Leadership actions communicate beliefs, values and assumptions and what is most important. A leader’s actions far outweigh newsletters, memos or policy manuals. Spending time walking the corridors and speaking and listening to employees and customers communicates a powerful message. Some leaders emphasize incentives and rewards. They foster individual and group competition. Other leaders encourage working in a collaborative manner and synergist relationships.

Human resources practices such as who gets hired and promoted, who gets terminated or demoted, who gets counseled and coached, who goes to training. Are people handled humanly or treated as an expense line item on the budget? How are people rewarded and how their performance is evaluated all send powerful messages and shape culture? Who gets rewarded?

Performance measures play an enormous role in determining an organization's culture. What gets measured – profits, costs savings, behaviors. Is individual or team contributions emphasized. Is short term or long term thinking and decisions emphasized.

External forces also shape culture and are very powerful since organizations reflect transnational, national, regional, industry and occupational ideologies. These may take the form of religion, science, political ideologies, and environmental concerns (nuclear energy, wildlife, world hunger). The substance of an organization’s culture may reflect many beliefs, only some of which originate within the organization. All of these elements listed above affect how people perceive the organization and how the behave.

## **Do You Know Your Organization’s Culture?**

Understanding and assessing your organization’s culture can mean the difference between success and failure in today’s fast changing business environment. Leaders typically have a view of their culture based on wishes than on a grounded, rational view. Understanding and then confronting the reality of an organization’s culture may not always be pleasant, but it is necessary. Very often what management pays attention to and rewards are often the strongest indicators of the organization’s culture. This is often quite different then the values it verbalizes or the ideals it strives for. Think for a minute about the culture you work in and imagine you were asked to describe your organization to an outsider. How would you answer the following questions: What ten words would you use to describe your company? Around here what’s really important? Around here who gets promoted? Around here what behaviors get rewarded? Around here who fits in and who does not fit in? Does management encourage or discourage innovation? Do mavericks fit in or do they get pushed out? Does management reward employees for coming up with new ideas and challenging old ways of doing things? Does the organization truly value excellence or is the mentality “just ship it”? Does management pay attention to the wellbeing of employees or is it completely focused on task and profits?

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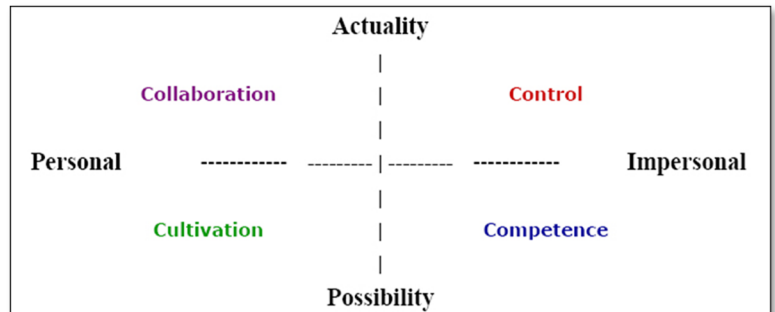
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This kind of inquiry can give insight into the real culture of your organization and some of its underlying values and beliefs. It may not be what you think. Your organization’s culture is not the espoused values developed at an offsite meeting and posted on your website. These are ideals. What you strive to be and what you hope to endorse, may be completely different from the values, beliefs and norms expressed in your actual practice and behavior. It is critical that you awaken and find out who you really are as well as striving for who you want to be. A good evaluation or assessment of where you are now can provide sound measurable data about the real organization’s values and beliefs. Individuals, groups, departments, projects, and organizations seldom fit one particular classification or pure type because they represent complex social systems and mixtures of many cultural patterns. Nevertheless, there are models that identify some systematic process that project and senior leaders can use to make sense of their environment. The one most compelling, elegant and robust used extensively by some very high profile firms is the model created by William Schneider. The rest of this paper will briefly describe Schneider’s model, an archetypal model that can be helpful for project as well as senior leaders in understanding the different dimensions of culture.

## The Four Core Cultures

The foundation of each of the four cultures rests on what each culture focuses on and how each makes decisions. Each culture is uniquely defined by the kind of input that is important to it and by the process it relies on to form judgments and make decisions. When



viewed together, the four cultures reveal a number of underlying patterns (See Exhibit 1 above).

The underlying pattern is illustrated by two axes that when combined with one another along two separate axes yield four component parts of the table and represent the four core cultures. The vertical axis considers what an organization pays attention to, or the content. The horizontal axis considers how an organization makes decisions, forms judgments or the process. The content axis is bounded by actuality and possibility; the process axis is bounded by impersonal and personal.

It is important to note that Schneider states “that the qualities and characteristics associate with the content and process axes are organizational and cultural preferences or central tendencies” and as such “are not exclusionary – having a preference for one does not preclude involvement in the other.” (Schneider, 1994, p51) It does not mean that facts are all that an actuality organization deals with or that a possibility organization never attends to facts. One simply predominates or is central to how the firm works. A brief description of each core culture is provided below.

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## **CONTROL Core Culture**

This culture is all about certainty and has its roots in a more militaristic model. It fundamentally exists to ensure certainty, predictability, safety, accuracy and dependability.

## **COMPETENCE Core Culture**

This culture is very much fixed on achievement and gaining distinction on being the very best and or having the very finest/highest quality – a five star rating. This is the culture of uniqueness, of one-of-a-kind products and/or services.

## **COLLABORATION Core Culture**

This culture basically has its roots in teams, family and affiliation and is all about synergy. It fundamentally exists to ensure unity and close connections with the customer. It pays a great deal of attention to concrete, tangible reality, actual experience and matters of practicality and utility. However, its decision-making process is people driven, organic and informal.

## **CULTIVATION Core Culture**

This culture has its roots in religion and religious systems, meaningfulness and self-actualization and is all about enrichment. It pays attention chiefly to potentiality, ideals and beliefs, aspirations and inspirations, and creative options. Its decision making method is people driven, open-minded and subjective.

## **Implications for the Project Leader**

Projects often have a profound impact on the organization and the people within it. Projects transform all or parts of an organization and by their very nature create change to the base organization or individual departments. Projects usually involve the design and development of a new physical product or service that may contain complex technical elements. The problem most common of projects is to concentrate and emphasize the technical content at the expense of understanding its impact on the people (users) and the organization. An important characteristic of project work is the extent to which people who will use the product are invited to participate in the work. Very often the work is done by specialist without the cooperation, participation and commitment of the end users.

Project leaders must be able to interact with various sub-cultural elements within their organization and that of the customer and often simultaneously. Leaders who are aware of cultural differences can avoid or minimize unproductive conflicts and misunderstandings. Differences may arise for various reasons including, values, assumptions, and beliefs and arise from problems communicating across cultures. The nature of communication in research and development is very different from the language spoken in marketing. It is important for the leader to make a concerted effort to speak and listen in ways that take these differences into account.

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An obstinate, hasty judgment that attributes project barriers to another person's inflexibility or stubbornness may polarize differences, escalate conflict and make it very difficult or next to impossible to complete the project.

Projects have a higher probability of succeeding when they:

- Start with the premise that organizations are living social systems.
- Assess, identify, work with and align with the organization's core culture.
- Design on the front end a system focused perspective and are implemented in a manner congruent with that design.
- Tie directly to the organization's strategy
- Align with culture and leadership initiatives
- Understand that all organizations have a lead core culture and subcultures and the key is that the project culture must function in service of the organization's core or lead culture.


## Summary

The purpose of this article was to demonstrate that project teams and organizations have unique personalities, value systems and a way they do things to succeed. The more a project leader understands the concept of culture, the more effective he will be in gaining support and guiding the project through the myriad of organization mazes. Project leaders often engage in transactions with several different cultures simultaneously. Project leaders typically work within their own base organization core culture, with the subcultures of other departments (research and development, marketing and sales or manufacturing – each with their own inherent “ways of doing things around here to succeed”) or working with external customers and their core culture. Understanding and speaking the language of the immediate culture is critical for project success. Effectively communicating with the surrounding culture can help develop plans, strategies that are more likely recognized and time-honored, by bypassing practices that violate the beliefs and values of the client organization.

Project leaders have many opportunities to create and shape a project culture in purposeful ways, but that culture must be in alignment with the organization's lead culture. This is an important part of project team development and a healthy team climate and stage setting to ensure project success.

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Suda, L. V. (2007). [The meaning and importance of culture for project success.](#)

*Paper presented at PMI® Global Congress 2007— EMEA, Budapest, Hungary. Newtown Square, PA: Project Management Institute.*

## Just for Fun: September's Notable Events and Famous Birthdays

1 — Singer Conway Twitty was born (1933), World War II started when Germany invaded Poland (1939), TV host Dr. Phil was born (1950), pitcher Masanori Murakami became the first Japanese major league player (1964), Muammar al-Quaddafi overthrew the Libyan government (1969), and the Soviet Union shot down a South Korean airliner (1983).

2 — World War II ended as Japan officially surrendered to the Allies (1945), **quarterback/sportscaster Terry Bradshaw** (1948), actor Keanu Reeves (1964) and actress Selma Hayek (1968) were born, and the first ATM opened (1969).



3 — The American Revolution officially ended with the Treaty of Paris (1783), actor Charlie Sheen was born (1965), and a siege in a Russian school ended with more than 300 people dead (2004)

4 — Apache chief Geronimo became the last Indian warrior to surrender to U.S. troops (1886), the first coast-to-coast telecast of a presidential speech was broadcast (1951), swimmer Mark Spitz won a then-record 7th Olympic gold medal (1972), singer Beyonce was born (1981), Google became incorporated (1998), and Kelly Clarkson won the first American Idol (2002).

5 — The first Continental Congress convened (1774), Sioux chief Crazy Horse was killed (1877), comedian/actor Bob Newhart was born (1929), terrorists attacked Israeli athletes at the Olympics — the event resulted in 18 deaths (1972), **President Gerald Ford survived an assassination attempt** (1975), and Katie Couric debuted as the first solo female network news anchor (2005).



6 — Ferdinand Magellan completed the first circumnavigation of the globe (1522), the first military tank was built (1915), and baseball "ironman" Cal Ripken played in his 2,131st consecutive game (1995).

7 — The U.S. government was nicknamed "Uncle Sam" (1813) and musician Buddy Holly was born (1936).

8 — Singer Patsy Cline was born (1932), Italy surrendered to the Allies (1943), American troops occupied southern Korea (1945), President Gerald Ford pardoned former president Richard Nixon (1974), the Oprah Winfrey Show was televised nationally for the first time (1986), and Mark McGwire broke the major league single-season home run record with his 62nd (1998).

9 — The "United States of America" is named by Congress (1776), California became the 31st U.S. state (1850), KFC founder **Colonel Sanders** was born (1890), **Esther Cleveland** became the first presidential baby born in the White House (1893), singer Otis Redding was born (1941), a Japanese pilot conducted the only air attack on the U.S. mainland at Mt. Emily in Oregon (1942), and quarterback/sportscaster Joe Theismann (1949) and actor Adam Sandler (1966) were born.

10 — The first-ever DUI arrest was made in London (1897), golfer Arnold Palmer was born (1929), the guillotine was used for the last time (1977), and the grunge era began as Nirvana's "Smells Like Teen Spirit" was released (1991).

11 — Football coaching legends Bear Bryant (1913) and Tom Landry (1924), and actor/singer Harry Connick Jr. (1967) were born, Pete Rose broke the major league record for career hits with his 4,192nd (1985), and "Never Forget" (2001).

12 — Track champion Jesse Owens (1913) and singer Barry White (1944) were born.

13 — "The Star-Spangled Banner" was written (1814), physician Walter Reed (1851), World War I general John J. Pershing (1860), and author Roald Dahl (1916) were born, a four-day riot at New York's Attica Prison ended with 39 deaths (1971), and rapper Tupac Shakur died after being shot six days earlier (1996).

14 — **Theodore Roosevelt became president after the death of William McKinley, who was shot eight days earlier** (1901), the Soviet Union sent the first man-made object to the moon (1959), and pitcher Denny McLain became the last 30-game winner in the major leagues (1968).



15 — President William Taft was born (1857), transcontinental mail service began

(1858), author Agatha Christie (1890), actor Tommy Lee Jones and director Oliver Stone (1946), and quarterback Dan Marino (1961) were born, four black girls were killed in a bomb blast at a church in Birmingham, Ala. (1963), and Muhammad Ali became the first boxer to win the world heavyweight title three times (1978).

16 — The Mayflower departed England for the New World (1620), the Mexican War of Independence began (1810), General Motors was incorporated (1908), blues musician B. B. King was born (1924), the Selective Service and Training Act was signed by President F.D. Roosevelt (1940), and a gunman killed 12 people at the Navy Yard in Washington, D.C. (2013).

17 — The U.S. Constitution was signed (1787), the Battle of Antietam was fought, resulting in nearly 23,000 casualties (1862), **actor John Ritter was born** (1948), NASA unveiled its first space shuttle (1976), and a peace agreement between Israel and Egypt was signed (1978).



18 — The cornerstone of the U.S. Capitol was laid (1793), and cycling champion Lance Armstrong was born (1971).

19 — President James A. Garfield died from a gunshot wound he received two months earlier (1881), New Zealand became the first country to allow women to vote (1893), the first underground nuclear explosion was conducted in Nevada (1957), and TV host Jimmy Fallon was born (1974).

20 — Author Upton Sinclair was born (1878), Chester Arthur became U.S. president (1881), and actress Sophia Loren (1934) and hockey star Guy Lafleur (1951) were born.

21 — France's monarchy was abolished and the First Republic established (1792), and authors H.G. Wells (1866) and Stephen King (1947), actor Bill Murray (1950), and singer Faith Hill (1967) were born.

22 — President Lincoln delivered the Emancipation Proclamation (1862), baseball manager Tommy Lasorda (1957) and singer Joan Jett (1960) were born, the Peace Corps was established (1961), President Ford survived a second assassination attempt (1975), the first Farm Aid concert was held (1985), and the sitcom *Friends* made its debut (1994).

23 — Neptune was discovered (1846), and singers Ray Charles (1930) and Bruce Springsteen (1949) were born.

24 — The Supreme Court was established (1789), **Muppets creator Jim Henson was born** (1936), and the Honda Motor Company was incorporated (1948).



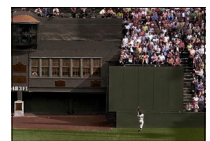
25 — The Bill of Rights was approved by Congress (1789), TV journalist Barbara Walters (1931), actor Michael Douglas (1944), and rapper/actor Will Smith (1968) were born, and Sandra Day O'Connor became the first female Supreme Court justice (1981).

26 — Composer George Gershwin was born (1898), the first American soldier was killed in Vietnam (1945), West Side Story opened on Broadway (1957), the first televised presidential debate was held between JFK and Nixon (1960), and the Baltimore Orioles became the last major league team with four 20-game winners (1971).

27 — Founding father Samuel Adams was born (1722), the Axis powers were formed (1940), and singers Meat Loaf (1947) and Shaun Cassidy (1959) were born.

28 — Painter Michelangelo (1573) and TV host Ed Sullivan (1901) were born, Ted Williams became the last major league player to hit .400 (1941) and hit a home run in his last career at-bat (1960), and actress Gwyneth Paltrow was born (1973).

29 — Nuclear physicist Enrico Fermi (1901), and singers Gene Autry (1907) and Jerry Lee Lewis (1935) were born, **Willie Mays made his famous over-the-shoulder catch in the World Series** (1954), and Stacy Allison became the first American woman to summit Mt. Everest (1988).



30 — Babe Ruth set the major league record for home runs in a season with his 60th (1927), singer Johnny Mathis was born (1935), the USS *Nautilus* was commissioned as the first nuclear submarine (1954), actor James Dean died (1955), and the first large-scale antiwar demonstration in the U.S. was held (1964).