Greetings Practitioners!

With the holiday season and the first month of the new year behind us we now turn our attention to new and interesting challenges and opportunities that lay ahead. Prior to our holiday break we were taking a close look at the National Defense Industrial Association Integrated Program Management Division Guide to the Integrated Baseline Review (IBR). Our February 2025 *Practitioner* returns to the IBR Guide to pick up where we left off.

IBR Preparation – Readiness Checkpoint 1: Identification of Key Program Elements

Preparation is the foundation for a successful IBR. The Customer and Supplier PMs need to work with their respective teams to prepare for the IBR. They also must communicate with each other extensively prior to the IBR to jointly determine the best approach for the review. The PMs must ensure the joint team is adequately prepared to conduct the IBR and to achieve its purpose.

The time and effort involved in the IBR will vary by program. A program's IBR timeline is driven by the program requirements (size, number of subcontractors or teammates, etc.) and is agreed upon by both the Customer and Supplier. Principal factors that influence time and preparation effort include the number of CAM discussions, the size and complexity of the project, the number and experience level of the IBR team members, and the overall risk of the project.

3.1 Supplier IBR Readiness

Readiness Checkpoint 1 is defined as IBR preparation that results in developing the Integrated Master Schedule (IMS) and the Performance Measurement Baseline (PMB) after contract award. In addition, both the Customer and Supplier PMs have a responsibility to provide a set of artifacts that support the IBR and a clear understanding of who will participate in the IBR. Joint activities occur during this checkpoint to ensure the Customer and Supplier are working to a common goal. Clear communication and expectations by both the Customer and Supplier will enhance a greater probability of success.

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3.1.1 Supplier Artifacts

At Checkpoint 1 the drafts of certain artifacts are available to support the preparation of the IBR. While the type and number of artifacts identified below are not all inclusive, they do represent the areas in which the IBR is typically focused. Both the Customer and Supplier coordinate to identify the artifacts required for the IBR. Once the Supplier has prepared the artifacts, the Customer should review them and provide any comments or questions to the Supplier no later than at Checkpoint 2. This helps the Customer and Supplier teams to clearly communicate the goals and expectations of the IBR, once it is conducted.

Examples of Supplier artifacts and short descriptions are as follows:

- Baseline Change Documentation. Baseline change documentation should be in accordance with the Supplier's internal processes. If there have been baseline changes since the IBR PMB was formalized, that documentation should be part of the artifact delivery.
- Budget Logs. All program budget logs related to the contract. For example, the Contract Budget Base (CBB) log, Undistributed Budget (UB) log, Management Reserve (MR) log, and Change Control Log should each identify any changes to budgets and current balances.
- Time-phased Control Account Plans (CAPs). A CAP is an artifact that depicts the time-phased, resource-loaded, work in each control account. The CAP defines the work packages and planning packages, the earned value technique (EVT) used to assess performance, POP dates for each work package, the specific resources assigned to each work package by element of cost (EOC), and the calendar spread of labor hours or direct cost in each work package.
- Critical Path Identification and Analysis. The critical path assessment shows the duration needed to complete all required effort. Since the entire schedule may not be detail planned at the time of the IBR, the critical path to any major milestones or significant events within the agreed-to planning horizon should be assessed. Later, once the entire critical path is identified, the team can discuss the overall timeline and any actions that may need to be taken.
- Contract Work Breakdown Structure (CWBS) and Dictionary. A CWBS and CWBS Dictionary are key artifacts that describe the project. The CWBS outlines the scope of work down to the level needed to understand the deliverable elements of work. When a CWBS is not used, the Customer and Supplier must reach a mutual understanding of the method used to organize the project.
- Engineering Bill of Material (EBOM). The engineering BOM defines the finished product as it was designed, and lists the items, parts, components, sub-assemblies, and assemblies in the product designed by engineering. For a finished product there may be more than one engineering BOM.
- Initial Integrated Master Plan (IMP) and Integrated Master Schedule (IMS). An IMP (if required) and IMS are the cornerstones of good integrated program management. Both are "living" documents, and the formulation of a PMB may require an iterative process requiring multiple review cycles. Delivery of the IMP usually occurs before the IBR and may also be required after significant contract modifications or baseline changes. An IMS delivery is also required as an IBR artifact and considered in the IBR readiness evaluation. The NDIA IPMD Planning & Scheduling Excellence Guide (PASEG) as well as the DoD Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) Preparation and Use Guide (2005) provide detailed information on the development and contents of the IMP and IMS.

IBR Preparation - Readiness Checkpoint 1

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- Current Contractual Performance Reports. For many Government programs, the IPMR is the primary means of communicating program cost and schedule performance information between the prime Supplier and the Customer. If IPMRs are available for the agreed upon month end data, the Supplier should provide that data to the IBR team. Other Customers may use a different report or format. The artifact list should include the program report defined to provide program cost and schedule performance.

- Material High/Low Value Threshold Breakdown. If the Supplier has a robust high/low value threshold system within their material planning processes (the breakdown of parts considered "high" value and those considered "low" value), the contract should require an explanation of what constitutes the rating be provided as part of the IBR artifacts.

- Critical Materials List. This is a list that identifies the critical material on the program. It may include Government Furnished Information (GFI), Government Furnished Equipment (GFE), and Government Furnished Property (GFP).

- Manufacturing Bill of Material (MBOM). The manufacturing BOM contains all the parts and assemblies required to build a complete product, including all the packaging materials required to ship the finished product to the Customer. The BOM also includes any processes that need to be performed on the item before it is completed and stores all the information required for manufacturing activities. This document is particularly critical for programs doing a Production IBR.

- Organization Charts and Program Points of Contact. The Supplier's Organizational Breakdown Structure (OBS) should provide a breakdown of their organization's hierarchal management structure established to perform the work on a specific contract. Each OBS element should have a responsible person identified. The organization can also be depicted in charts that show the reporting lines and identify the CAMs.

- Performance Measurement Baseline (PMB).A PMB is a key factor in ensuring the success of the program. The PMB has the following characteristics:
  - It represents only authorized work on the contract.
  - It includes a realistic schedule baseline.
  - It portrays a realistic time-phased spread of budget and resources to the baseline schedule.
  - It incorporates a methodology for determining the value of work accomplished.

- Developing the PMB is a time-consuming process. The formulation of the PMB will be in accordance with the Supplier's formal and compliant Earned Value Management System (EVMS) process description.

- Quantifiable Backup Data (QBD). This is used to validate the Supplier has established and is using objective methods for assessing progress in accordance with their established EVMS earned value techniques. The EVT is established based on how the work is planned (BCWS) and BCWP is earned consistent with the EVT. Only a sampling should be provided for demonstration.

- Responsibility Assignment Matrix (RAM). The RAM shows the relationship between the CWBS elements and the OBS, reflecting organizations assigned responsibility for ensuring the accomplishment of work. The RAM depicts the assignment of each control account to a single manager. A dollarized RAM also reflects the approved budgets associated with the identified control accounts.

- Time-phased Staffing Plan by Resource Type at the Control Account Level. A review of the Supplier's

time-phased staffing plan by resource type for each control account assists the IBR team in ensuring that the required number of adequately skilled resources will be available in a specific timeframe to support the effort. Any spikes or drops in staffing in short periods should be addressed by the Supplier.

- Key Risks and Opportunities (R&O). Throughout the proposal preparation and Request for Proposal (RFP) response period, risks and opportunities are identified and documented. Risks and opportunities that remain after completion of contract negotiations need to be accompanied by risk handling plans (mitigation or capture plans) with status provided on a periodic basis in accordance with the Supplier's Risk and Opportunity Management Plan (ROMP). The Supplier and the Customer need to understand the process used to identify and prioritize the risks and opportunities and how they will be elevated and communicated. The IBR may result in changes to the ROMP, confirmation of identified risks and opportunities, or addition/deletion of risks and opportunities.

- Earned Value Management System (EVMS) Description. The Supplier's EVMS description document that describes the Supplier's integrated system of program planning, management, and control that complies with the Standard for Earned Value Management Systems (EIA-748) 32 Guidelines.

- Earned Value Techniques (EVTs). The Supplier's EVT descriptions and correct usage should be provided if not included in the EVMS description document.

- Project Unique Process Documentation or Project Directives. If the Supplier has defined unique processes specific to a contract, the Supplier should provide a description of these processes.

- Schedule Risk Assessment (SRA). The Supplier may conduct an SRA prior to the IBR. An SRA uses statistical analysis (e.g., a Monte Carlo simulation) to estimate schedule risk, adequacy of schedule reserve, adequacy of management reserve, and reliability of the Estimate at Completion (EAC). The NDIA IPMD Planning & Scheduling Excellence Guide (PASEG) can provide further information.

- Work Authorizations. A Supplier's work authorization process is used to document the formal commissioning of both definitized and undefinitized work. At a minimum, the work authorization process should assign a named CAM to manage the control account, the amount of budget (based on the dollarized RAM), period of performance (POP) dates, and control account scope of work.

To continue with your own deep dive of the "National Defense Industrial Association Integrated Program Management Division Guide to the Integrated Baseline Review (IBR)", follow this link: **NDIA IBR Guide**.

It Is Not One World

Artificial Intelligence (AI), Like it or not, it is Here to Stay

Irrespective of our personal or professional opinions regarding AI, it appears to be here to stay. AI is and will continue to be a powerful tool in the Project Managers tool kit. Arguably, AI reflects our input but can process and provide information based on input we provide, through "prompts". Let's explore more about AI.

What is an AI? - Google Search

What is AI?

"*Artificial intelligence (AI) is a field of computer science that gives machines the ability to perform tasks that usually require human intelligence. AI systems can learn, solve problems, and make decisions.*"

How does AI Work?

- AI systems use algorithms and programmed rules to analyze data and make predictions.

AI is Here to Stay

Continued from previous page

- AI systems can learn from experience and improve their performance over time.
- AI systems can process large amounts of data quickly to find patterns.

What AI is not

Human intelligence: **AI is not human-like in its ability to think, reason, or understand**.

Creative: **AI can't create, conceptualize, or plan strategically**.

Emotional: **AI can't feel or empathize**.

Common sense: **AI can't use intuition or common sense to make decisions**.

Ethical: **AI can't make moral or ethical judgments**.

Dexterous: **AI can't do complex physical work that requires precise hand-eye coordination**.

Causal: **AI can't reason in causal terms, such as "mosquitoes cause malaria"**.

Bottom line is AI has no "gut feeling", hunch, or instinct. So far, those are feelings unique to humans...so for now, we still have an edge.

> *"If artificial intelligence is not intelligent enough to predict a better and cheaper competing artificial intelligence, we shouldn't be worried it taking over the world anytime soon." - paulbuiyink X (Twiter)*

What can AI do?

- AI can perform tasks like seeing, understanding language, and making recommendations.
- AI can help with complex problems, like predicting financial outlooks and optimizing energy solutions.
- AI can be used in healthcare, education, environmental sustainability, and more.

What is an AI Prompt?

"An 'AI prompt' is the input you provide to an artificial intelligence system, essentially a question, instruction, or set of keywords, that guides the AI to generate a specific response or perform a desired task; it's like giving a command to the AI, where the quality of the prompt directly impacts the quality of the AI's output."

[Project Management and AI Department of Energy Program Management AI Walt - Google Search](#)

DOE PROJECT MANAGEMENT NEWS
Promoting Project Management Excellence
October 2024

With the establishment of an AI Governance Board and secure integration with Azure Government OpenAI, PM is leveraging AI to streamline complex analyses and enhance project oversight. Discover how AI tools like PARSGPT and advanced techniques such as sentiment and gap analysis are revolutionizing our approach to project management.

AI AND ITS USE ON THE IP2M METRR ENVIRONMENT ASSESSMENT
Amber Young, Office of Project Controls and Policy (PM-30)

Artificial intelligence (AI) is changing the way we work. The Office of Project Management (PM) has embraced this change and is learning to harness the growing power of AI by standing up an AI Governance Board to review the impact, safety, and viability of AI projects and aligning our AI projects with the current guidance from within the Department of Energy (DOE) and from the Office of Management and Budget (OMB).

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AI is Here to Stay
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PM uses AI within our work by establishing a secure and contained connection with an AI application programming interface (API). All data passed to AI is stored within PARS. PARS data is maintained on Azure FedRAMP Government Cloud Computing – high (GCCH) servers and access is limited to appropriate personnel involved in project oversight and earned value data processing.

The system operates under a DOE authorization to operate (ATO) as a moderate system. Currently, PM accesses Azure Government Open AI API call from applications within the Azure GCCH instance, allowing secure AI interactions appropriate to government contexts. As this technology continues to rapidly develop, PM and our AI Governance Board will continue to assess options to use the most advanced AI models securely available.

The Integrated Project/Program Management (IP2M) Maturity and Environment Total Risk Rating (METRR) environment assessment comments are fertile ground for use of a large language model (LLM) AI, significantly reducing analysis from weeks to mere hours. The use of AI in PM is continuously evolving, fueled by creativity and interest.

For the complete October 2024 AI article, **click on this link**.

Just for Fun: February's Notable Events and Famous Birthdays

Notable Events

1 — The space shuttle *Columbia* broke apart (2003).

2 — The Mexican-American War ended (1848), baseball's National League was founded (1876), and Groundhog Day was first celebrated (1887).

3 — Musicians Buddy Holly, Ritchie Valens and Big Bopper died in a plane crash (1959).

4 — The American Revolutionary War officially ended (1783), Disney released S*now White and the Seven Dwarfs* (1938), and Facebook was launched (2004).

5 — United Artists was formed (1919).

6 — Elizabeth II was crowned Queen of England (1952).

7 — The Beatles played their first concert in the U.S. (1964), and the Soviet Union collapsed (1990).

8 — The Boy Scouts of America was founded (1910), and Jay Berwanger was the first player selected in the first NFL draft (1936).

9 — Volleyball was invented (1895), Daylight Saving Time was instituted (1942), **the Hollywood Walk of Fame opened** (1960), and the first American troops were sent to Vietnam (1965)

10 — The fire extinguisher was invented (1863)

11 — Singer Whitney Houston died (2012), and the World Health Organization named the COVID-19 virus (2020)

12 — The NAACP was founded (1909).

13 — President James Polk became the first president to be photographed (1849), and the last original "Peanuts" comic strip was published a day after Charles Schulz's death (2000).

14 — St. Valentine was martyred (270), Alexander Graham Bell invented the telephone (1876), and the St. Valentine's Day Massacre took place in Chicago (1929).

15 — The Spanish-American War began (1898), the first Teddy Bear was made (1903), Disney's Cinderella opened in theaters (1950), the entire U.S. figure skating team was killed in a plane crash (1961), and Canada adopted the maple leaf flag (1965).

16 — **King Tut's tomb was opened** (1923), Nylon was invented (1937), and the 9-1-1 system went into service (1968).

17 — The first weather satellite was launched (1959).

18 — *The Adventures of Huckleberry Finn* was published (1885), the first Academy Awards winners were announced (1929), the first 3-D movie opened (1953), and race car legend Dale Earnhardt was killed in an accident at Daytona (2001).

19 — Thomas Edison invented the phonograph (1878).

20 — The U.S. Postal Service was established (1792), and John Glenn became the first American to orbit Earth (1962).

21 — The sewing machine was invented (1842), Karl Marx published his *Communist Manifesto* (1848), NASCAR was incorporated (1948), DNA was discovered (1953), and Malcolm X was assassinated (1965).

22 — The Republican Party held its first national meeting (1856), the first Daytona 500 was held (1959), and the U.S. Olympic hockey team beat the USSR in the "Miracle On Ice" (1980).

23 — Plutonium was first produced (1941), and **the iconic flag raising on Iwo Jima occurred** (1945).

24 — Andrew Johnson became the first U.S. president to be impeached (1868).

25 — Samuel Colt invented the revolver (1836), the first televised NHL game was broadcast (1940), and Cassius Clay (Muhammad Ali) beat Sonny Liston for the heavyweight boxing championship (1964).

26 — RADAR was first demonstrated (1935), and the World Trade Center was bombed (1993).

27 — The first Mardi Gras celebration in New Orleans was held (1827).

28 — DNA was discovered (1953).

Birthdays

1 — Activist Frederick Douglass (1818), actor Clark Gable (1901), singer Rick James (1948) and MMA fighter Ronda Rousey (1987)

2 — Actress Farrah Fawcett (1947), model Christie Brinkley (1954) and singer Shakira (1977)

3 — Painter Norman Rockwell (1894), actress Morgan Fairchild (1950), and actor Nathan Lane (1956)

4 — Aviator Charles Lindbergh (1902), civil rights activist Rosa Parks (1913), **singer Alice Cooper** (1948) and football Hall of Famer Lawrence Taylor (1959)

5 — Baseball Hall of Famer Hank Aaron (1934)

6 — Baseball Hall of Famer Babe Ruth (1895), 40th U.S. President Ronald Reagan (1911), and singer Bob Marley (1945)

7 — Author Charles Dickens (1812), singer Garth Brooks (1962), comedian Chris Rock (1965), and actor Ashton Kutcher (1977)

8 — Actress Lana Turner (1921), actors Jack Lemmon (1925), James Dean (1931) and Nick Nolte (1941), football player Julio Jones (1989) and basketball player Klay Thompson (1990)

9 — 9th U.S. President William Henry Harrison (1773) and actor Joe Pesci (1943)

10 — Gold medal Olympic swimmer Mark Spitz (1950), and golfer Greg Norman (1955)

11 — Inventor Thomas Edison (1847), actor Burt Reynolds (1936), singer Sheryl Crow (1962), and actress Jennifer Aniston (1969)

12 — 16th U.S. President Abraham Lincoln and biologist Charles Darwin (1809), basketball Hall of Famer Bill Russell (1934), and entertainer Arsenio Hall (1955)

13 — TV host Jerry Springer (1944), basketball coach Mike Krzyzewski (1947) and **football Hall of Famer Randy Moss** (1977)

14 — Comedian Jack Benny (1894), mobster Jimmy Hoffa (1913), and actress Florence Henderson (1934)

15 — Inventor Galileo Galilei (1564), and hockey Hall of Famer Jaromir Jagr (1972)

16 — Singer/politician Sonny Bono (1935), rapper/actor Ice T (1958), and football Hall of Famer Jerome Bettis (1972)

17 — Football Hall of Famer Jim Brown (1936), **comedian Larry the Cable Guy** and basketball Hall of Famer Michael Jordan (1963)

18 — Actor John Travolta (1954), and rapper Dr. Dre (1965)

19 — Astronomer Copernicus (1473), singer Smokey Robinson (1940), actor Jeff Daniels (1955), and singer Seal (1963)

20 — Basketball Hall of Famer Charles Barkley (1963), singer Kurt Cobain (1967), baseball star Justin Verlander (1983), and singer Rihanna (1988)

21 — Actor Kelsey Grammer (1955)

22 — First U.S. President George Washington (1732), basketball Hall of Famer Julius "Dr. J" Erving (1950), and actress Drew Barrymore (1975)

23 — **Actress Dakota Fanning** (1994)

24 — Entrepreneurs Phil Knight (1938) and Steve Jobs (1955), and boxer Floyd Mayweather (1977)

25 — Guitarist George Harrison (1943)

26 — Singers Fats Domino (1928) and Johnny Cash (1932)

27 — Actress Elizabeth Taylor (1932), football Hall of Famer Tony Gonzalez (1976), and First Daughter Chelsea Clinton (1980)

28 — Hockey Hall of Famer Eric Lindros (1973) and singer Jason Aldean (1977)

2024 Newsletter Recap

Just for Fun: January's Notable Events and Famous Birthdays

Notable Events

1 — The Julian calendar took effect (45 B.C.), Abraham Lincoln signed the Emancipation Proclamation (1863), the ball was first dropped at Times Square in New York City (1908), **Fidel Castro overthrew the Cuban government** (1959), and NAFTA went into effect (1994)

2 — Georgia became a state (1788), and the national speed limit was set at 55 mph (1974)

3 — King Tut's tomb was discovered (1924), the March of Dimes was founded (1938), and Alaska became a state (1959)

4 — Utah became a state (1896), and the euro made its debut (1999)

5 — The Yankees purchased Babe Ruth from the Red Sox (1920), construction on the Golden Gate Bridge began (1933), and the space shuttle program was authorized (1972)

6 — Samuel Morse demonstrated the telegraph (1838), New Mexico became a state (1912), and Wheel of Fortune debuted on TV (1975)

7 — The first U.S. presidential elections were held (1789), and President Clinton's impeachment trial began (1999)

8 — The Battle of New Orleans was fought (1815), and the No Child Left Behind Act became law (2002)

9 — Apple launched iTunes (2001) and the iPhone (2007)

10 — The world's first subway system opened in London (1863), the United Nations met for the first time (1946)

11 — The Grand Canyon was declared a national monument (1908), and American League baseball adopted the "designated hitter" rule (1973)

12 — *Batman* debuted on television (1966), and a magnitude 7.0 earthquake struck Haiti (2010)

14 — The Treaty of Paris officially ended the American Revolutionary War (1784), the Miami Dolphins completed the only undefeated season in NFL history (1973), and **basketball legend Michael Jordan retired for the second time** (1999)

15 — The first Super Bowl was played (1967)

16 — Prohibition went into effect (1919), and Operation Desert Storm began (1991)

17 — The U.S. overthrew the Hawaiian monarchy (1893), the PGA was formed (1916), the Chevy Corvette was first unveiled (1953), and the Los Angeles Rams announced their move to St. Louis (1995)

18 — Willie O'Ree became the first Black player in the NHL (1958), and Major League Baseball owners approved interleague play (1996)

19 — The PGA approved the participation of Black golfers (1952), Sandy Koufax became the youngest player elected into the Baseball Hall of Fame (1972), and the first BlackBerry device hit the market (1999)

20 — The "British Invasion" began when the Beatles released their first album in the U.S. (1964), and the Iran Hostage Crisis ended (1981)

21 — **The Kiwanis Club was formed** (1915), and the first case of COVID-19 in the U.S. was confirmed (2020)

22 — Abortion was legalized in the U.S., and President Lyndon Johnson died (1973)

23 — The world's deadliest earthquake killed 830,000 in China (1556), and the Frisbee was introduced (1957)

24 — Beer was first sold in cans (1935), and British statesman Winston Churchill died (1965)

25 — Transcontinental phone service began in the U.S. (1915), the first Winter Olympics were held in Chamonix, France (1924), and the first Emmy Awards were presented (1949)

26 — The dental drill was patented (1875), and television was first demonstrated to the public (1926)

27 — The National Geographic Society was founded (1888), and three astronauts died in a launch pad fire aboard *Apollo 1* (1967)

28 — The space shuttle *Challenger* exploded (1986)

29 — Kansas became a state (1861), baseball's American League was founded (1900), and the first members of the Baseball Hall of Fame were elected (1936)

30 — Adolf Hitler was named chancellor of Germany (1933), Mohandas Gandhi was assassinated (1948), and the Vietnam War's Tet Offensive began (1968)

31 — Slavery was abolished in the U.S. (1865), and President Truman announced the development of the hydrogen bomb (1950)

Birthdays

1 — Patriot Paul Revere (1735), flag maker Betsy Ross (1752), and FBI Director J. Edgar Hoover (1895)

2 — Science fiction writer Isaac Asimov (1820) and actor Cuba Gooding, Jr. (1968)

3 — Author J.R.R. Tolkien (1892), actor Mel Gibson (1956), and quarterback Eli Manning (1981)

4 — Sir Isaac Newton (1643), hall of fame football coach Don Shula (1930), and actress Dyan Cannon (1937)

5 — Actor Robert Duvall (1931), actress Diane Keaton (1946), and actor Bradley Cooper (1975)

6 — Joan of Arc (1412) and entertainer Danny Thomas (1912)

7 — 13th U.S. President Millard Fillmore (1800), singer/songwriter Kenny Loggins (1948), TV personality Katie Couric (1957), and actors Nicolas Cage (1964) and Jeremy Renner (1971)

8 — Singer Elvis Presley (1935), scientist Stephen Hawking (1942), and **singer David Bowie** (1947)

9 — 37th U.S. President Richard Nixon (1913), actor Bob Denver (1935), and singers Crystal Gayle (1951) and Dave Matthews (1967)

10 — Singer Rod Stewart (1945) and boxer George Foreman (1949)

11 — Founding Father Alexander Hamilton (1755) and golf legend Ben Crenshaw (1952)

12 — Boxer "Smoking" Joe Frazier (1944), radio talk hosts Rush Limbaugh (1951) and Howard Stern (1954), actress Kirstie Alley (1955), and Amazon founder Jeff Bezos (1964)

13 — Actor Robert Stack (1919), actress Julia Louis-Dreyfus (1961), and actor Patrick Dempsey (1966)

14 — Traitor Benedict Arnold (1741), humorist Andy Rooney (1919), actress Faye Dunaway (1941), rapper LL Cool J (1968), and actor Jason Bateman (1969)

15 — Rich guy Aristotle Onassis (1906), actor Lloyd Bridges (1913), Civil Rights activist Dr. Martin Luther King Jr. (1929), and quarterback Drew Brees (1979)

16 — Inflatable tire inventor Andre Michelin (1853), singer Ethel Merman (1909), and racing legend A.J. Foyt (1935)

17 — Statesman Benjamin Franklin (1706), gangster Al Capone (1899), actress Betty White (1922), hair and fashion designer Vidal Sassoon (1928), boxer Muhammad Ali (1942), actor Jim Carey (1962), and former first-lady Michelle Obama (1964)

18 — Thesaurus author Peter Roget (1779), Winnie the Pooh creator A.A. Milne (1882), and actors Oliver Hardy (1892), Cary Grant (1904), Danny Kaye (1913) and Kevin Costner (1955)

19 — Confederate Gen. Robert E. Lee (1807), author Edgar Allen Poe (1809), singers Dolly Parton (1936) and Janis Joplin (1943), and TV chef Paula Deen (1947)

20 — Entertainer George Burns (1896), **actor Deforrest Kelley** (1920), and astronaut Buzz Aldrin (1930)

21 — Revolutionary war hero Ethan Allen (1738), Confederate Gen. Stonewall Jackson (1824), actor Telly Savalas (1924), comedian Benny Hill (1925), and golf legend Jack Nicklaus (1940)

22 — Actor Bill Bixby (1934)

23 — Statesman John Hancock (1737)

24 — Actor Ernest Borgnine (1917), singer Neil Diamond (1931), actor John Belushi (1949), and gold medal Olympic gymnast Mary Lou Retton (1968)

25 — Actor Dean Jones (1931) and singer Alicia Keys (1981)

26 — WWII Gen. Douglas MacArthur (1880), actor Paul Newman (1925), guitar god Eddie Van Halen (1955), entertainer Ellen DeGeneres (1958), and hockey legend Wayne Gretzky (1961)

27 — Composer Wolfgang Amadeus Mozart (1756) and *Alice in Wonderland* author Lewis Carroll (1832)

28 — Actor Alan Alda (1936)

29 — **25th U.S. President William McKinley** (1843), actors W.C. Fields (1880), John Forsythe (1918) and Tom Selleck (1945), and TV personality Oprah Winfrey (1954)

30 — 32nd U.S. President Franklin D. Roosevelt (1882), actor Gene Hackman (1930), musician Phil Collins (1949), and actor Christian Bale (1974)

31 — Baseball legends Jackie Robinson (1919) and Nolan Ryan (1938), and singer Justin Timberlake (1981)