



2015
Richard H Johnson
Technical Achievement Award

2015 Winners:
Dr. Wade Dyer
Mr. Paul Manz

About the Award

- The Precision Strike Association awards the Richard H. Johnson Technical Achievement Award (the Johnson Trophy) at the Precision Strike Technology Symposium.
- This award is named after the first recipient, and recognizes an individual from public or private sector for outstanding personal technical achievements resulting in significant contribution to precision strike systems.



Award Criteria

- The award honors notable technical innovations in the field of precision strike which advanced the defense of the United States.
- Recipients made these contributions as individual technologists, advancing state of the art. In selecting a recipient, PSA seeks nominees whose accomplishments and contributions:
 - Transcend a single program
 - Were sustained over a period of time
 - Have been widely felt by the warfighters who defend the United States
 - Has influenced other technologists
 - Have made precision strike systems more available to warfighters defending the United States



Prior Winners

- 2009 Richard H. Johnson
- 2010 Robert J. Whalen
- 2011 Robert H. Widmer
- 2012 David Keith Sanders
- 2013 Dr. Gary F. Polansky
- 2014 Chris Geswender



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October 28, 2015

Texas Instruments & Raytheon Dyer & Johnson's Birdie Head Designs



BOLT –First US LGB (GBU-1)



GBU-3

USAF Photo



GBU-11

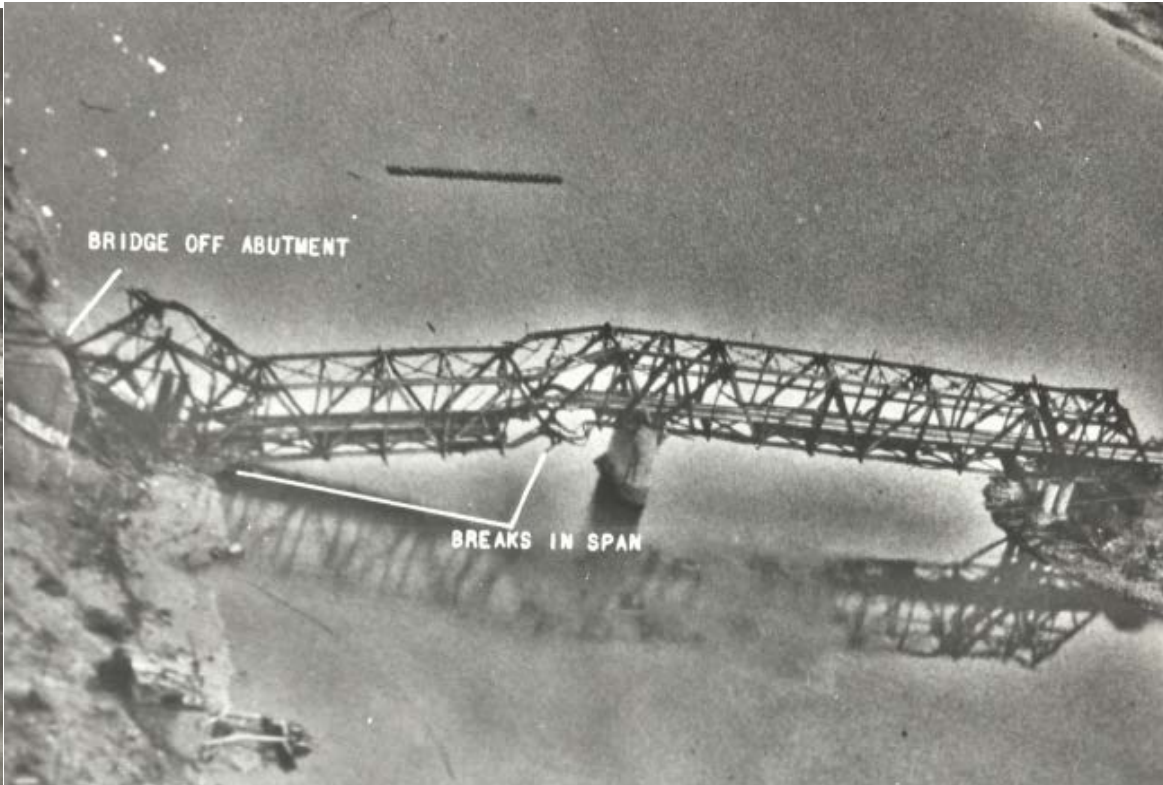
- "BOLT" was followed by Paveway I and Paveway II
- *These design families worked out the basic principles used by every guided bomb product line world wide, with or without a birdie seeker*





PRECISION STRIKE
AIRCRAFT

LGB Use in Viet Nam



Post mission photos show effects LGB strikes

Some bridges withstood hundreds of attacks, only to be dropped with the *first* LGB attack

"Laser guided" came mean "really good" in popular culture; military plans included precision strike as something worthy of serious consideration

What Wade's Colleagues say about Recognition, and What Matters

- 'During the Vietnam conflict, laser guided bombs were utilized with 17,000 being deemed mission successful. There are a whole host of pilot and squadron stories....
- In the early 80's there was a prestigious recognition ceremony in Washington DC for the program and it's contributors. The writer was the chosen one to accept the award... After the close a Marine Colonel approached and said thanks... Then as he was moving on he turned ... stepped back and said thanks again and then he added ... *"this effort kept at least 10,000 body bags in the warehouse in Delaware ... Thanks" '*

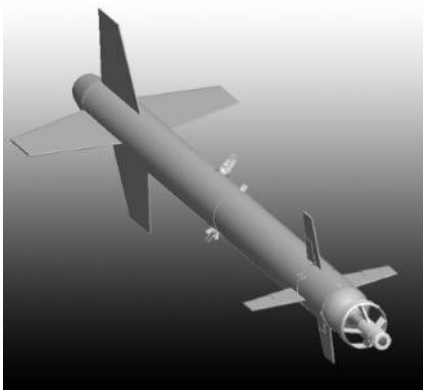
Lockheed Martin and Emerson Electric Also Produced Designs Derived from Wade & Dick's Work



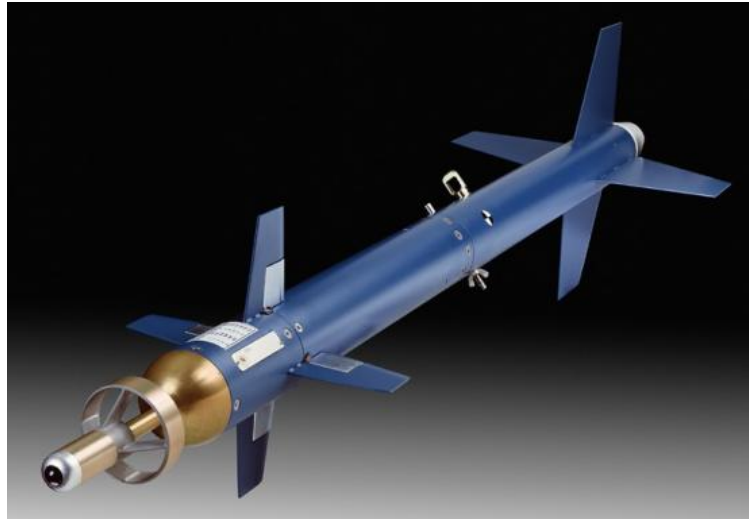
Lockheed Martin LGB



Emerson Electric Skipper II AGM-126



Lockheed Martin Scalpel



Lockheed Martin LGTR

Examples of International Imitations of Birdie Head Designs



Chinese LT-2



Russian KAB-500L



Israeli PB-500 A1



Russian KAB-250L



French BGL

Many others could be cited

Other Designs Wade Influenced



JSOW



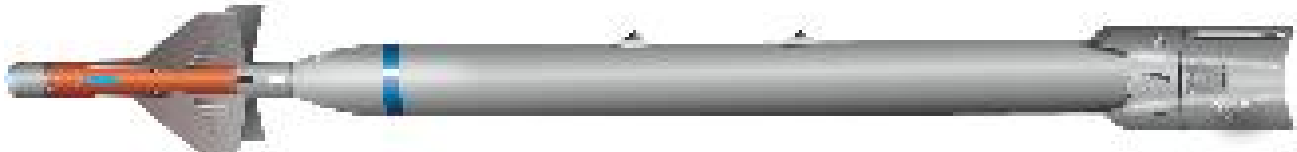
GBU-15



GBU-24



Javelin

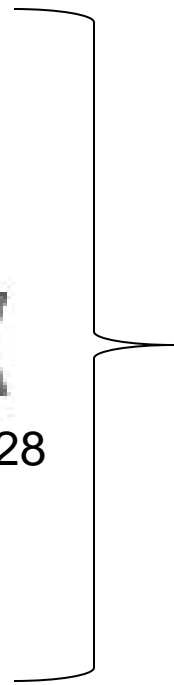


GBU-28

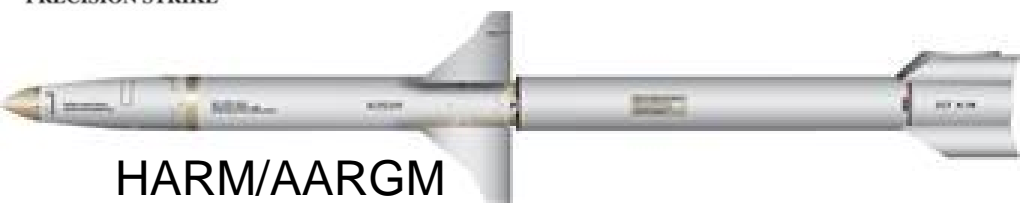


GBU-27

Paveway III
Family



Designs Which Waded Improved or Supported



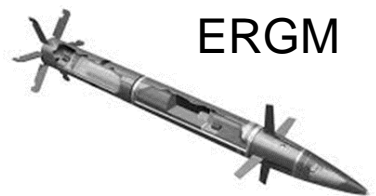
HARM/AARGM



Excalibur



Shrike



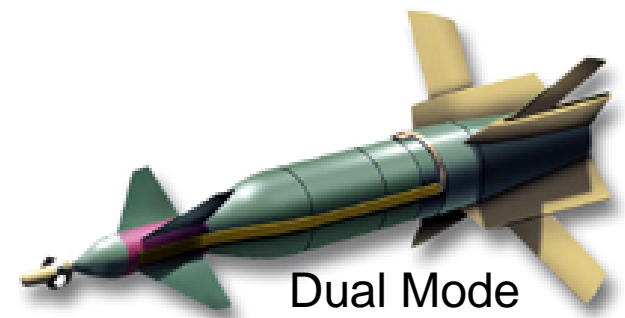
ERGM



CLGP



Tacit Rainbow



Dual Mode Paveway (Paveway IV)



Seek Spinner

Many others could be cited

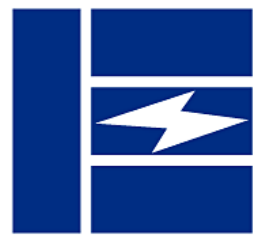
Wade Dyer and Desert Storm

- Wade influenced the majority of the precision guided weapons used in Desert Storm
 - 65% used Wade Dyer's system engineering and/or Guidance & Control

Wade's Systems (a partial list)

- HARM
- Paveway
- JSOW
- Javelin
- ERGM
- Excalibur
- Seek-Spinner
- Crosshairs
- Tacit Rainbow
- GBU-15 All Weather Upgrade
- CLGP
- Shrike
- Rapid Reaction Gun Systems
- Radars

Examples of US Defense Firms Who Use or Used Wade's Contributions



Mentor and Role Model

- Wade's reputation is being a person with *amazing amounts of intellectual energy and amazingly few words*; he leads by example and suggestion, answers questions without long lectures
- An attempt to count the number of younger Systems Engineers, and, Guidance & Control engineers failed – there were too many to count, over too many decades
- Wade's role model status was very much like Dick Johnson; neither of them believed in arguing very long about the "right answer" *before too long, they simply suggested a way to get measured data* to settle disagreements
- Several of Wade's understudies were recognized for innovations and inventions to which Wade contributed. Unlike others who justly sought to have their names connected, *Wade was happy to let the younger folks get the spot light, without taking any credit for himself*



**PRECISION STRIKE
ASSOCIATION**

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The impact of Mr. Manz's many excellent contributions has certainly been felt in the precision strike community. Most notably Mr. Manz has personally identified and successfully championed innovative multi-organizational solutions on numerous highly complex problems which have accelerated the maturation and insertion of enabling precision strike related technologies providing new battlefield capabilities to counter enemy threats.



Paul Manz

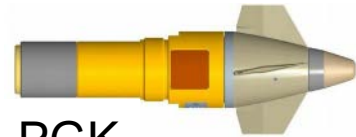
Products Paul Has Influenced



JSOW



APMI



PGK



Excalibur



LRLAP



PERM

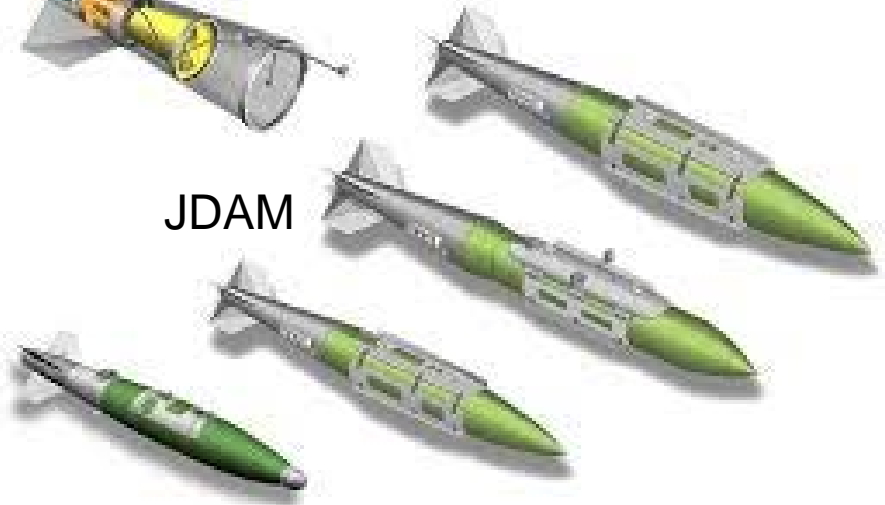


GMLRS



JDAM

SDB II



Accessible, on the phone



Accessible, one on one

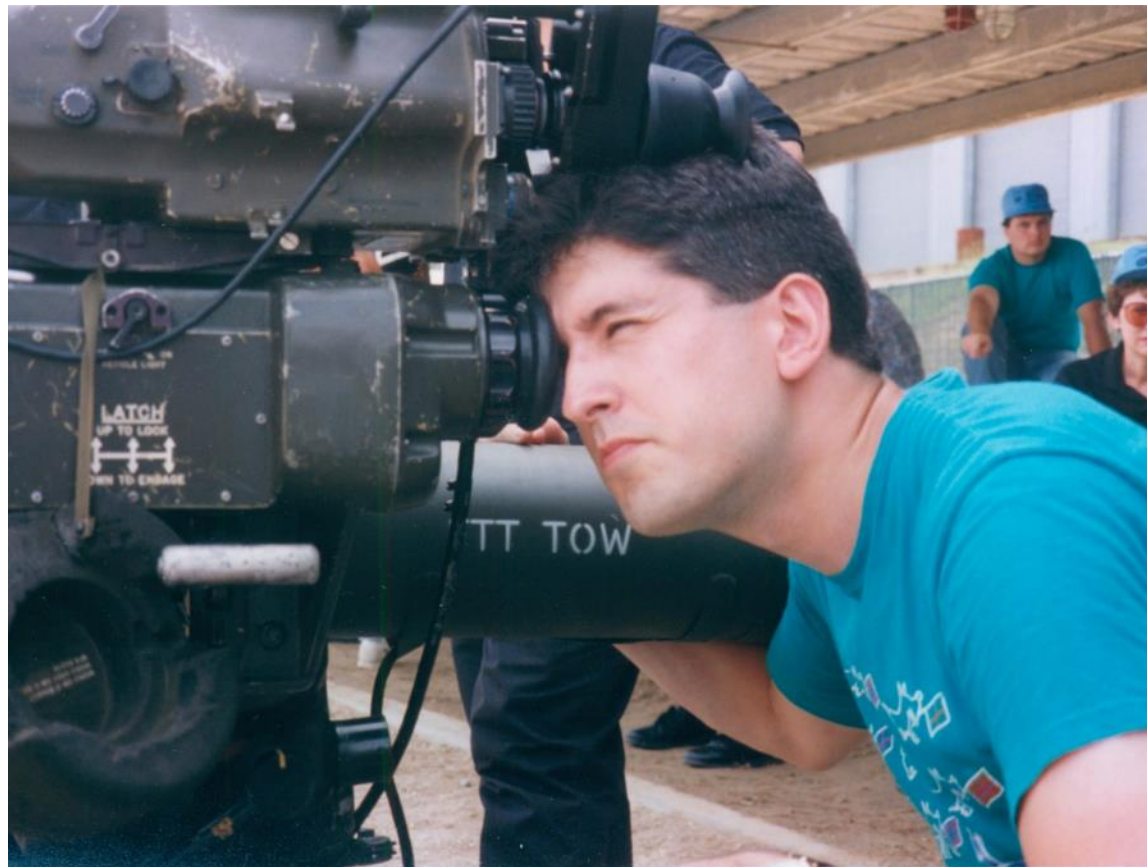


Adam Scanlan, ARDEC Engineer, explains the ARDEC-developed "High G" test fixture that will house the first-ever Military GPS User Equipment (MGUE) Precision Guided Munition (PGM) prototype M-Code GPS receiver for subsequent 15,000+ Gs setback testing at Joint Center Picatinny

Advanced Individual Academic Development (AIAD) Project

CDT Colin McDermott
(USMA Cadet),
COL Lisa Shay
(USMA Faculty),
BG Patrick Burden
(DPEO Ammo),
CDT Jacob Paniccia
(USMA Cadet)





"Greening the Civilian Executive"

A younger Paul at Ft Benning in the early 1990s viewing the target before a TOW firing



More "Greening the Civilian Executive"

Yes, Paul drove that Bradley through a wooded serpentine training course much to the dismay of the real crew chief!

Electronics Technology and Device Laboratory (ETDL) Staff

A less younger Paul on the headquarters staff of the Electronics Technology and Device Laboratory (ETDL) at Fort Monmouth during the mid-1990s where he worked directly with the head senior executives from the Joint Service laboratories



Seated Left to Right: Dr. Clare Thornton, USA ETDL; Dr. Horst Wittmann, USAF AF Research Lab; Standing Left to Right: Dr. Cliff Lau, USN Office of Naval Research, Dr. Jim Mink, USA Army Research Office, Herb Pollehn USA Night Vision Labs; Paul Manz, USA ETDL; Dr. Mike Thompsett USA ETDL (ATT Bell Labs Inventor of the CCD); and Dr. Gerry Borsuk USN Naval Research Lab

Paul Manz , Deputy PM for
Field Artillery Tactical Data
Systems under PEO C3T,
and SES James Barbarello,
USA CECOM CERDEC,
during CERDEC Tech Day
at Fort Monmouth





awards

Award from MG Gerald Brohm USA CECOM CG
at Fort Monmouth in the late 1990s



Another of Paul's Awards

Paul Manz as PEO Ammo Chief Scientist receiving an Award from BG John McGuinness USA PEO Ammo



Paul in his role today as
PEO Ammo Chief Scientist
Paul Manz PEO Ammo Chief Scientist and SES
Gerry Melendez then-ARDEC Director at
Picatinny Arsenal

Army AL&T
Magazine October
–December 2015

For more on Paul be
sure to read the article
and interview in:
Army AL&T Magazine
October –December
2015



MR. PAUL MANZ

COMMAND/ORGANIZATION:
Program Executive Office for Ammunition

TITLE: Chief scientist

DAWIA CERTIFICATIONS:
Level III in engineering, program management, science and technology management, life-cycle logistics, business, cost estimating, financial management, and systems planning, research, development and engineering (SPRDE). Also serves as Army DAWIA SPRDE acquisition functional reviewer for all engineering acquisition career fields.

YEARS OF SERVICE IN WORKFORCE: 31

EDUCATION:
MPA (public administration), Fairleigh Dickinson University; B.S. in electrical engineering, New Jersey Institute of Technology; Lean Six Sigma Black Belt

AWARDS:
Meritorious Civilian Service Award; Superior Civilian Service Award (2); Commander's Award for Civilian Service (2); Achievement Medal for Civilian Service (2); Army Research and Development Achievement Award; Outstanding AMC Personnel of the Year Award; Ancient Order of St. Barbara; Holds 7 U.S. patents

SCIENCE &
TECHNOLOGY

SPOTLIGHT:

MR. PAUL MANZ

Keeping an eye on 'the right next thing'

In the 30-plus years since he joined the Army Acquisition Workforce, Paul Manz has transitioned from being the "oldest of the young" to the "youngest of the old." But the chief scientist for the Program Executive Office for Ammunition (PEO Ammo) is quick to note that that isn't such a bad thing. "I frequently find myself in the role of a mentor, which I also enjoy, discussing and sharing the underlying whys and hows of solutions to problems with my younger colleagues using the experiences and knowledge I've gained over my career."

Manz has held positions across the joint munitions, battle command, fire support, enterprise architecture, systems engineering and electronic devices communities, and has supported numerous major acquisition category (ACAT) systems. "I've been fortunate that my career has touched the entire materiel development life cycle, from science and technology through production and deployment, which in turn has helped me become a better problem-solver," he said.

Manz has seen a great deal of change since 1984, the biggest being the role that information technology plays in the workforce. "Omnipresent information technology creates an ever-increasing demand for producing and delivering timely critical information so leaders can make informed decisions in a fast-moving strategic

environment. As a young engineer, I saw how difficult it was for leadership and senior staff to maintain a healthy balance between their work life and family life. It's even more difficult to maintain that balance when people are now constantly electronically connected, especially in our current climate of international conflict, fiscal uncertainty and significant potential organizational change," he said.

"I have also seen a general and growing preference by many people to communicate via email versus picking up the phone or walking down the hall to talk to someone in person," Manz added. "I know there is goodness in being able to inform all stakeholders at the same time with the same information via email to make sure that everyone is on the same sheet of music, but that can also create communication inefficiencies: it's easier to hit the 'send' button instead of taking the time to truly filter who should get what information at that specific point in time in the overall process."

Manz admits that he thought about leaving government work for the private sector a few times over the past 30-plus years. "But looking back, each time I made the decision to remain a federal civilian employee, it was the right decision. I think everything you do and every experience you gain has a bigger purpose leading you to the right next thing in your life, and I



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