



1  
00:00:01,400 --> 00:00:08,580  
(sound of movie projector)

2  
00:00:08,600 --> 00:00:09,580  
(music plays)

3  
00:00:09,740 --> 00:00:12,850  
In 1955, Neil Armstrong became a

4  
00:00:12,870 --> 00:00:14,690  
research pilot at NASA's Flight

5  
00:00:14,710 --> 00:00:17,090  
Research Center in Edwards, CA.

6  
00:00:19,950 --> 00:00:21,600  
Here, he flew almost all of the

7  
00:00:21,620 --> 00:00:23,430  
century series of jet fighters.

8  
00:00:23,750 --> 00:00:25,070  
The F-100...

9  
00:00:25,190 --> 00:00:26,700  
the F-101...

10  
00:00:27,190 --> 00:00:28,400  
the F-102...

11  
00:00:28,890 --> 00:00:30,010  
the F-104...

12  
00:00:30,530 --> 00:00:31,910  
and the F-105.

13  
00:00:32,460 --> 00:00:34,580

He also piloted the F5-D...

14

00:00:34,600 --> 00:00:36,380  
the Casey 135...

15

00:00:36,800 --> 00:00:38,010  
the B-47...

16

00:00:39,300 --> 00:00:41,950  
and his first flight was in the P-51.

17

00:00:43,870 --> 00:00:45,220  
During this time, he served as

18

00:00:45,240 --> 00:00:46,820  
a launch pilot on the extensively

19

00:00:46,840 --> 00:00:49,120  
modified B-29 that was used to

20

00:00:49,140 --> 00:00:50,960  
air launch the X-1E.

21

00:00:51,950 --> 00:00:54,560  
He also flew the X-5, the first aircraft

22

00:00:54,580 --> 00:00:56,730  
capable of sweeping its wings in flight,

23

00:00:57,150 --> 00:01:00,370  
a technique in use on F-14 and B-1 today.

24

00:01:01,390 --> 00:01:03,640  
While at the Flight Research Center, Neil made

25

00:01:03,660 --> 00:01:06,510  
several flights in the X-1B, a rocket powered

26  
00:01:06,530 --> 00:01:08,610  
airplane that eventually reached speeds of

27  
00:01:08,630 --> 00:01:13,450  
up to 1600 mph. And in 1958, he was named

28  
00:01:13,470 --> 00:01:15,750  
as one of the original seven pilots for the

29  
00:01:15,770 --> 00:01:18,720  
X-15 program, which was later acclaimed as

30  
00:01:18,740 --> 00:01:20,720  
the most successful rocket powered

31  
00:01:20,740 --> 00:01:21,890  
research aircraft.

32  
00:01:22,680 --> 00:01:25,530  
Specializing in stability and control, Neil

33  
00:01:25,550 --> 00:01:27,830  
worked closely with engineers in developing

34  
00:01:27,850 --> 00:01:30,370  
an adaptive flight control system that would

35  
00:01:30,390 --> 00:01:32,900  
eventually allow the X-15 to fly to near

36  
00:01:32,920 --> 00:01:34,270  
orbital altitudes.

37  
00:01:35,060 --> 00:01:36,910  
He piloted the first four flights on this

38  
00:01:36,930 --> 00:01:39,540

system in the number three X-15, and later

39

00:01:39,560 --> 00:01:42,010

received the AIAA's prestigious

40

00:01:42,030 --> 00:01:44,210

Octave Chanute Award for this effort.

41

00:01:44,730 --> 00:01:47,150

Although originally developed in the 1950s

42

00:01:47,170 --> 00:01:49,280

to increase man's knowledge of hypersonic

43

00:01:49,300 --> 00:01:51,950

aeronautics, manned space flight was the

44

00:01:51,970 --> 00:01:54,360

immediate beneficiary of the X-15

45

00:01:54,380 --> 00:01:55,490

research program.

46

00:01:55,510 --> 00:01:57,490

The program dramatically demonstrated the

47

00:01:57,510 --> 00:02:00,030

capability of the human pilot for employing

48

00:02:00,050 --> 00:02:02,730

a fantastic variety of acquired skills,

49

00:02:02,750 --> 00:02:05,900

sensing, judging and coping with the unexpected.

50

00:02:06,390 --> 00:02:08,900

The X-15 was air launched from as far as

51  
00:02:08,920 --> 00:02:11,710  
300 miles from its destination. The rocket

52  
00:02:11,730 --> 00:02:14,180  
engine would only burn for 90 seconds until

53  
00:02:14,200 --> 00:02:16,850  
its fuel was exhausted and the aircraft would

54  
00:02:16,870 --> 00:02:19,410  
continue to climb ballistically to altitudes

55  
00:02:19,430 --> 00:02:22,920  
in excess of 300,000 feet and speeds of over

56  
00:02:22,940 --> 00:02:24,750  
six times the speed of sound.

57  
00:02:25,310 --> 00:02:28,260  
Yet, barring any unforeseen mechanical problems,

58  
00:02:28,840 --> 00:02:30,990  
the pilots were almost always able to maneuver

59  
00:02:31,010 --> 00:02:33,960  
their hypersonic glider to a landing within

60  
00:02:33,980 --> 00:02:36,570  
1000 ft of their intended mark.

61  
00:02:36,790 --> 00:02:41,500  
(music plays)

62  
00:02:41,620 --> 00:02:44,810  
In the early 1960s, Neil became involved with

63  
00:02:44,830 --> 00:02:47,340

the development and testing of a new concept

64

00:02:47,360 --> 00:02:50,050

that was being considered for use as a possible method

65

00:02:50,530 --> 00:02:53,350

of recovering both manned and unmanned spacecraft.

66

00:02:55,370 --> 00:02:57,890

Although the concept showed promise, subsequent

67

00:02:57,910 --> 00:03:01,120

testing revealed operational problems that made

68

00:03:01,140 --> 00:03:03,430

the paraglider more suitable to hang gliders

69

00:03:03,450 --> 00:03:05,130

than spacecraft recovery.

70

00:03:06,780 --> 00:03:08,830

It was during this same time that Neil,

71

00:03:09,080 --> 00:03:11,730

flying a prototype jet fighter, developed a

72

00:03:11,750 --> 00:03:14,440

technique for the abort rescue of a new manned

73

00:03:14,460 --> 00:03:16,440

spacecraft under consideration.

74

00:03:16,730 --> 00:03:19,110

It was called the X-20 Dyna-Soar and it was

75

00:03:19,130 --> 00:03:20,940

built for the US Air Force.

76

00:03:22,730 --> 00:03:23,980

It would have been launched into

77

00:03:24,000 --> 00:03:26,210

space using a Titan III booster.

78

00:03:27,440 --> 00:03:29,720

Once in space, the X-20 would orbit

79

00:03:29,740 --> 00:03:32,520

the Earth using a principle called dynamic soaring.

80

00:03:32,540 --> 00:03:34,390

Originally developed by the Germans during

81

00:03:34,410 --> 00:03:37,690

World War II, once the speed decreased,

82

00:03:37,710 --> 00:03:39,660

the spacecraft would re-enter the Earth's

83

00:03:39,680 --> 00:03:42,700

atmosphere and land like a simple glider.

84

00:03:44,020 --> 00:03:48,300

In all, Neil logged 2,600 flight hours in over

85

00:03:48,320 --> 00:03:53,210

900 flights at Edwards. And all before becoming

86

00:03:53,230 --> 00:03:55,940

the most famous astronaut of all time.

87

00:03:57,770 --> 00:04:00,380

This was one of the most exciting of places

88

00:04:00,400 --> 00:04:03,690

in the world at that time. The flight test

89  
00:04:03,710 --> 00:04:06,920  
world was filled with excitement. Dozens and

90  
00:04:06,940 --> 00:04:10,460  
dozens of new concepts and configurations and

91  
00:04:10,480 --> 00:04:13,300  
tests - something new to talk about every day.

92  
00:04:13,720 --> 00:04:16,770  
And I believe that, whenever I have the privilege

93  
00:04:16,790 --> 00:04:20,500  
of visiting here again, in years ahead,

94  
00:04:20,520 --> 00:04:23,570  
and ask someone, "What's new?"

95  
00:04:25,360 --> 00:04:26,740  
There'll always be something.