RE & M² FYI
SD

~~Holliday~~
L. D. FRUTIGER
– This looks worth cross-checking against data we are using.
BBH

HAS-6-7600-M86-041
December 19, 1986

To: A. D. Welliver

cc: A. J. Anderson

Subject: Technology Timing

Ardell asked that I forward the attached pages on technology timing to you.

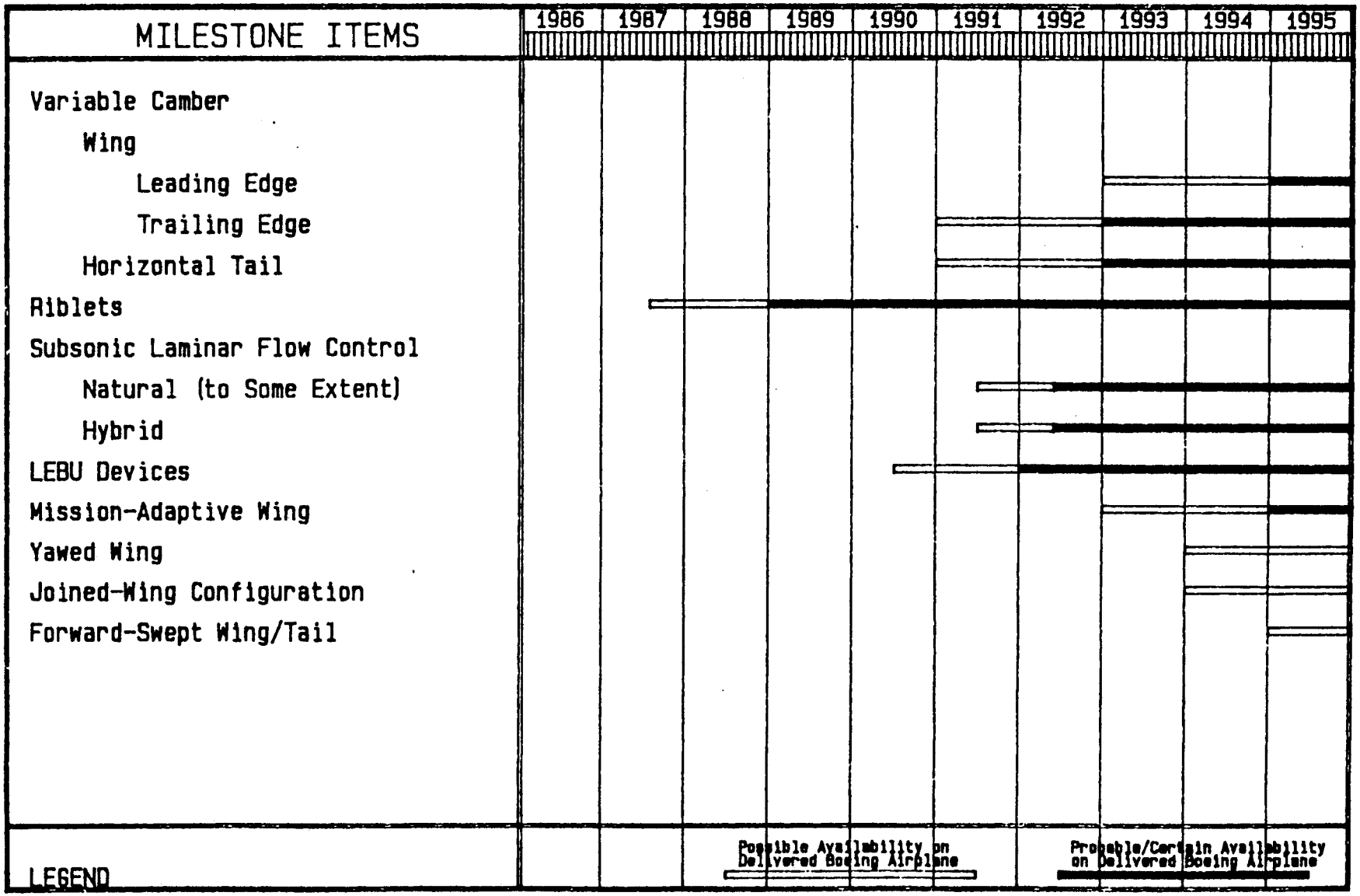
These pages are a snapshot view of our perception of the timing of technology in Boeing Commercial Airplanes. As you will note, we have also included a few instances of earlier applications in competitive commercial airplanes, or other non-military airplanes. These examples are limited to those we are currently aware of and others will be added to the charts as we are able to identify them.

These charts portray the New Product Development view of this timing. It is our goal to develop a set of charts that reflect technology development across the corporation and are useful in establishing BCAC IR&D priorities. I will forward copies of any revisions to you as they become available.

If you have any questions, please call.

Henry
H. A. Shomber
237-4007

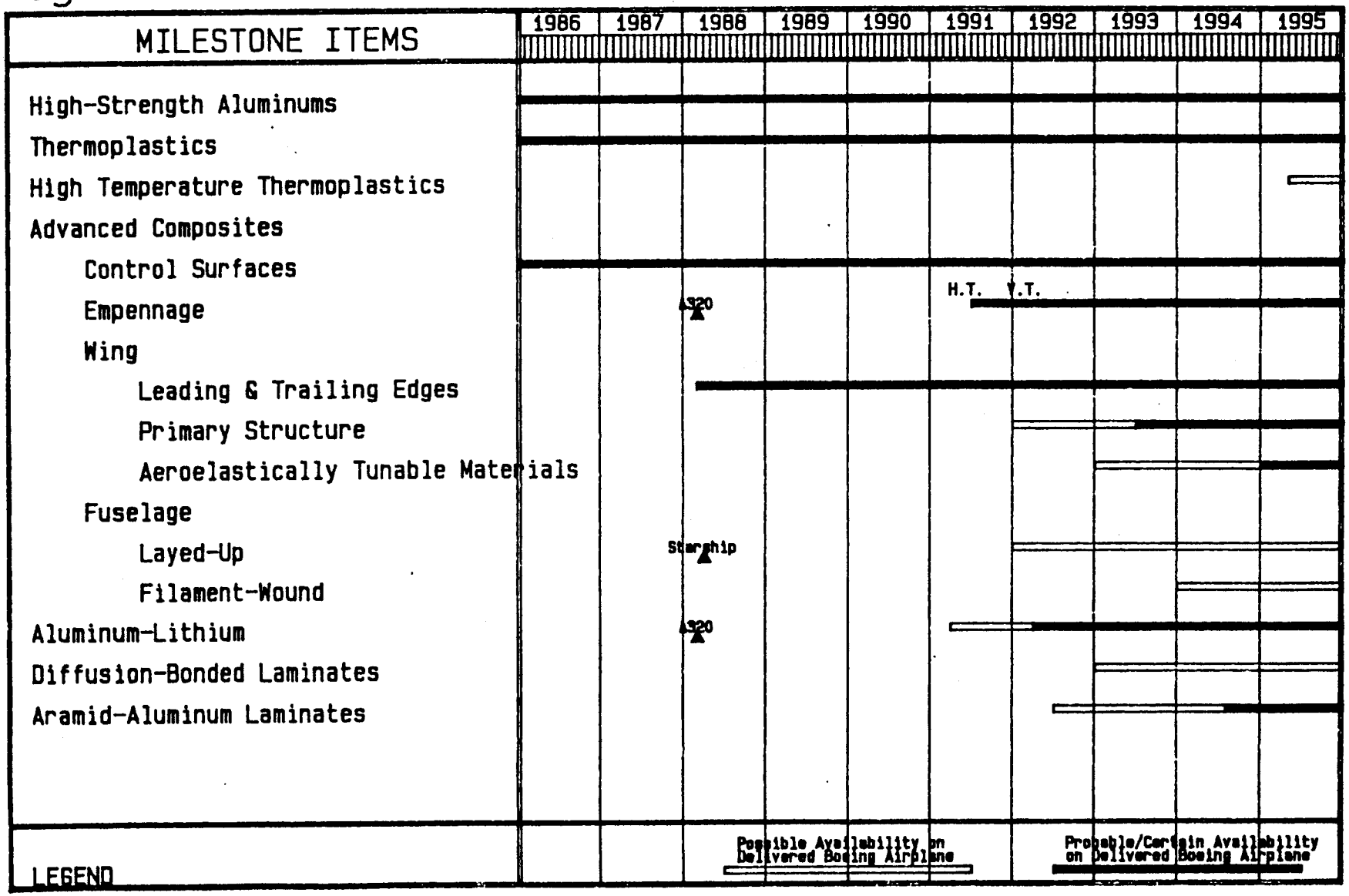
AERODYNAMICS



AS OF 19 DEC 1986

CHART NO. XAERO

MATERIALS



AS OF 19 DEC 1986

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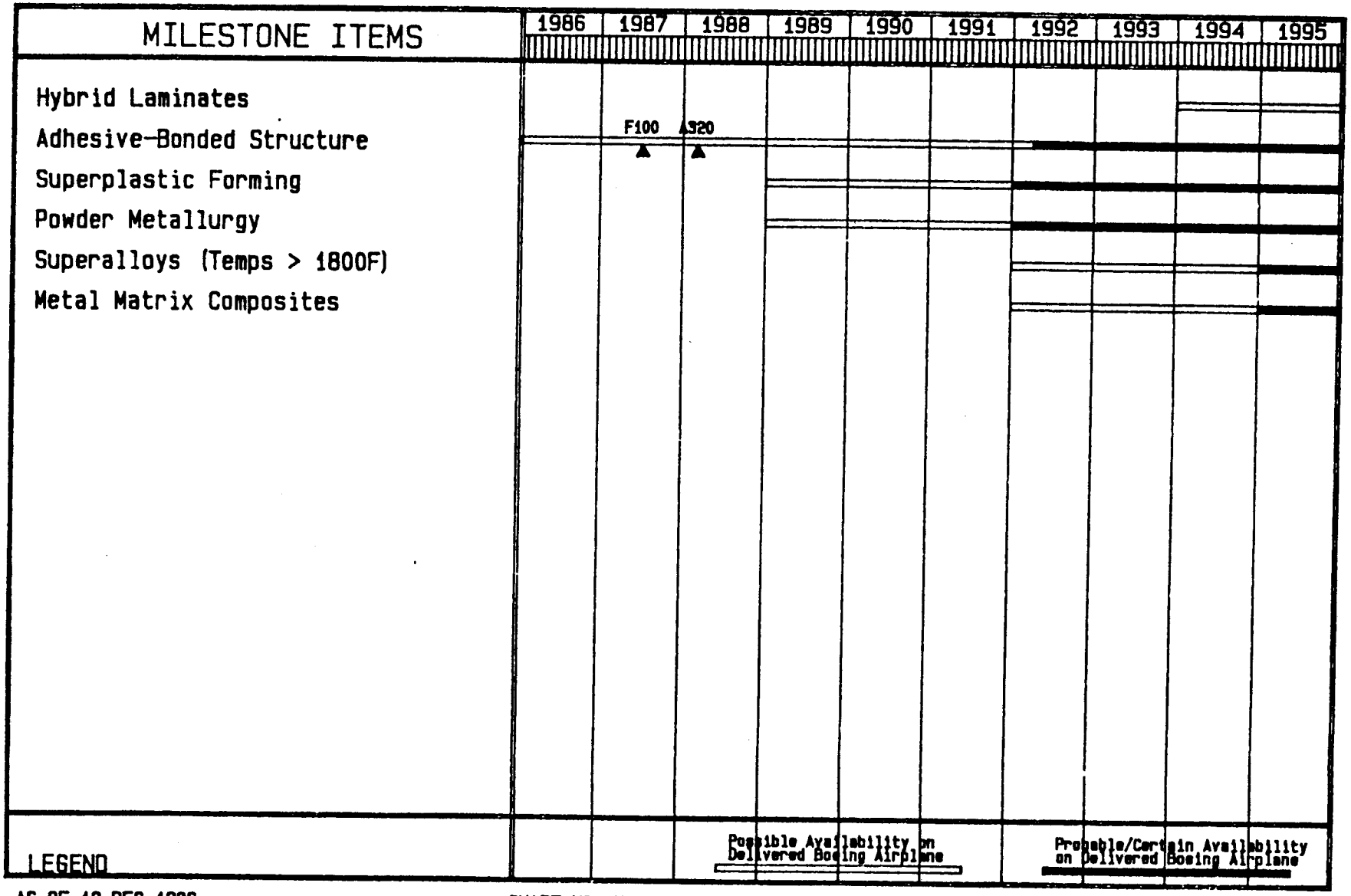
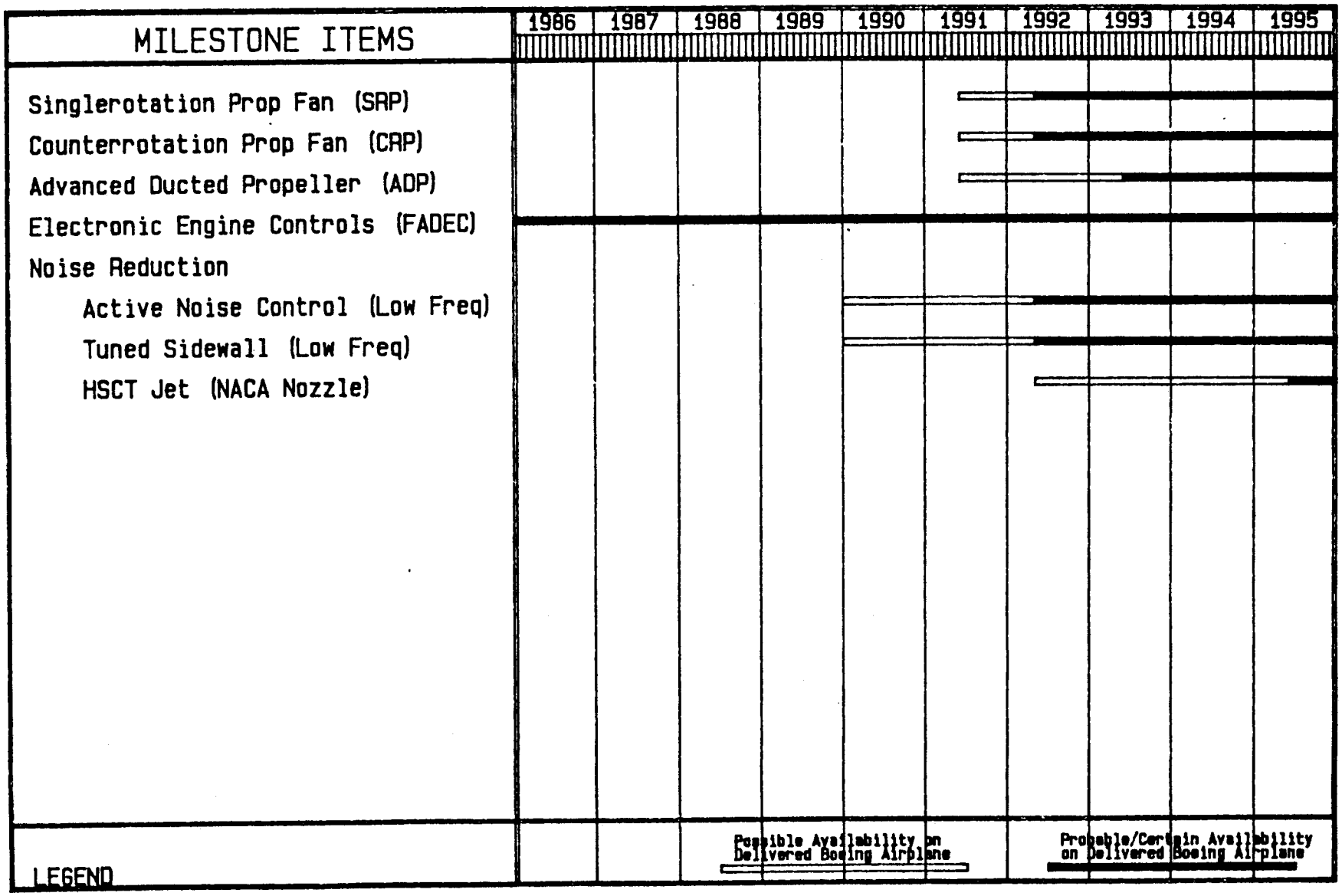
MATERIALS



AS OF 19 DEC 1986

CHART NO. XMATL2

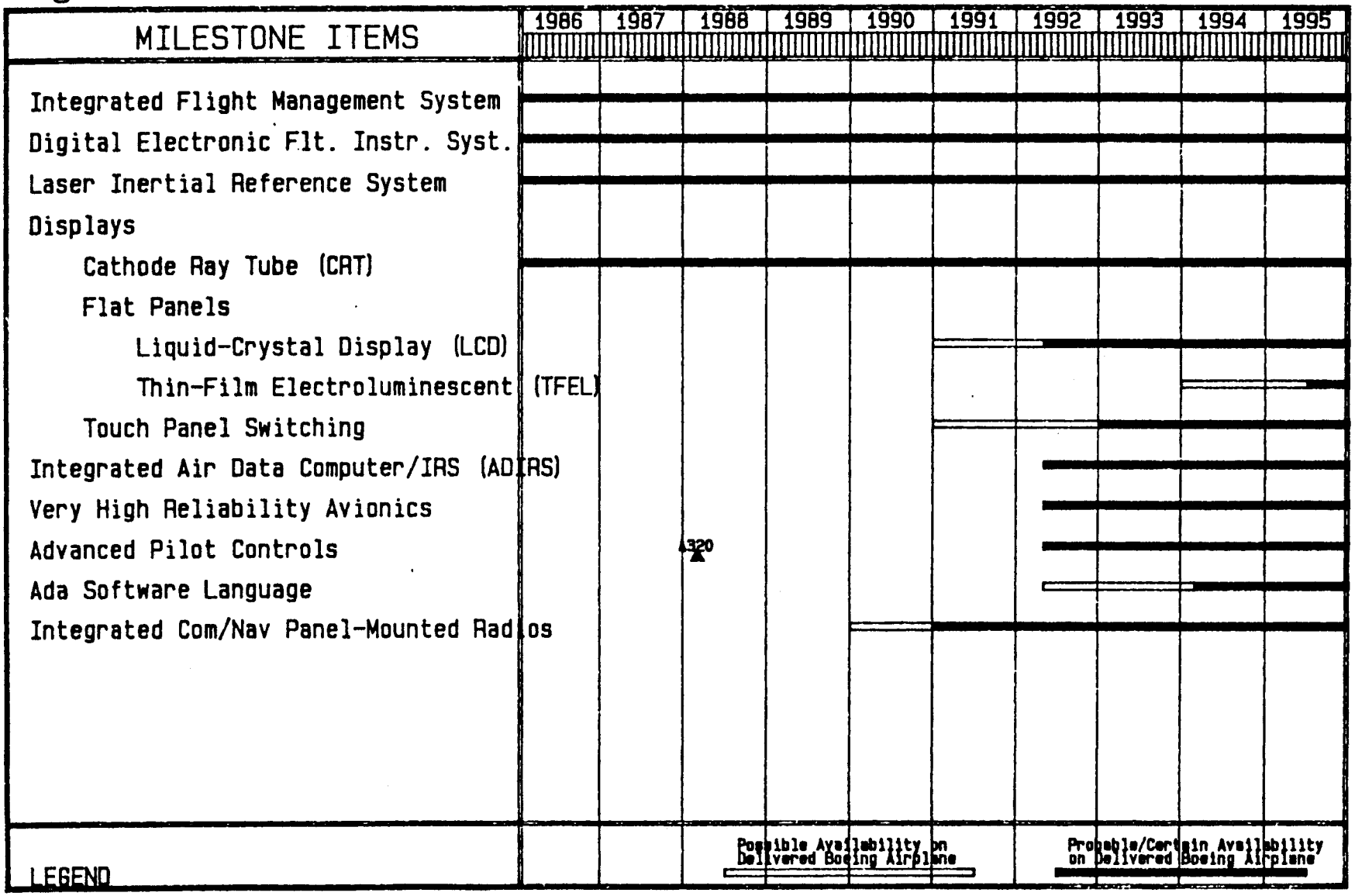
PROPULSION/NOISE



AS OF 19 DEC 1986

CHART NO. XPRPNOIS

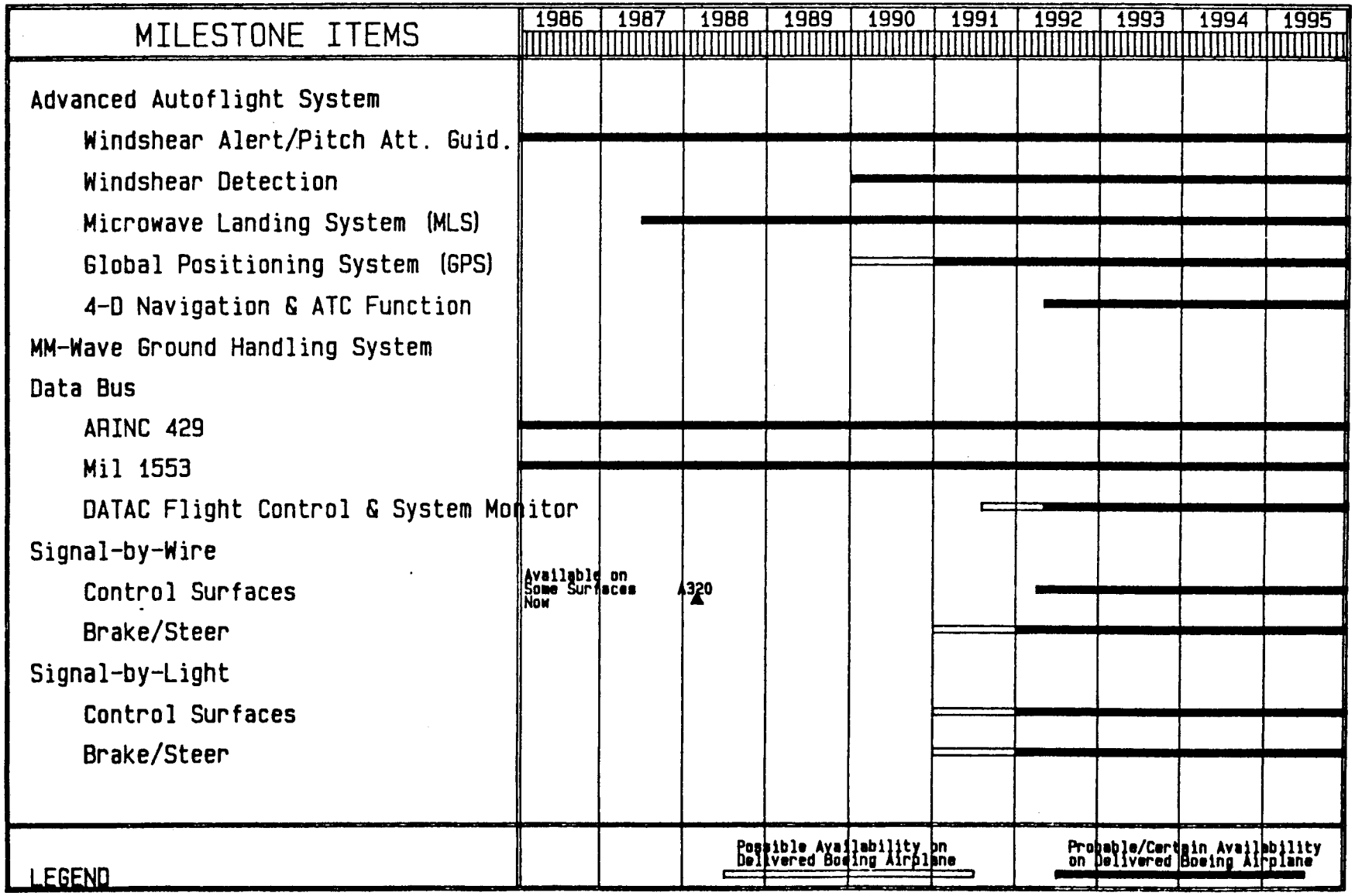
SYSTEMS



AS OF 19 DEC 1986

CHART NO. XSYST1

SYSTEMS



AS OF 19 DEC 1986

CHART NO. XSYST2

SYSTEMS

MILESTONE ITEMS	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Power-by-Wire										
Flight Controls										
Electrohydrostatic Actuators (EHA)										
Electromechanical Actuators (EMA)										
Landing Gear Actuation										
Nose Gear Steering										
Active Controls / Control-Configured Vehicle										
Gust Load Alleviation										
Maneuver Load Control										
Stability Augmentation										
Envelope Limiting										
Carbon Brakes										
Generators										
Variable-Speed Constant-Frequency (VSCF)										
Wild Frequency										
Vortex-Driven										

LEGEND

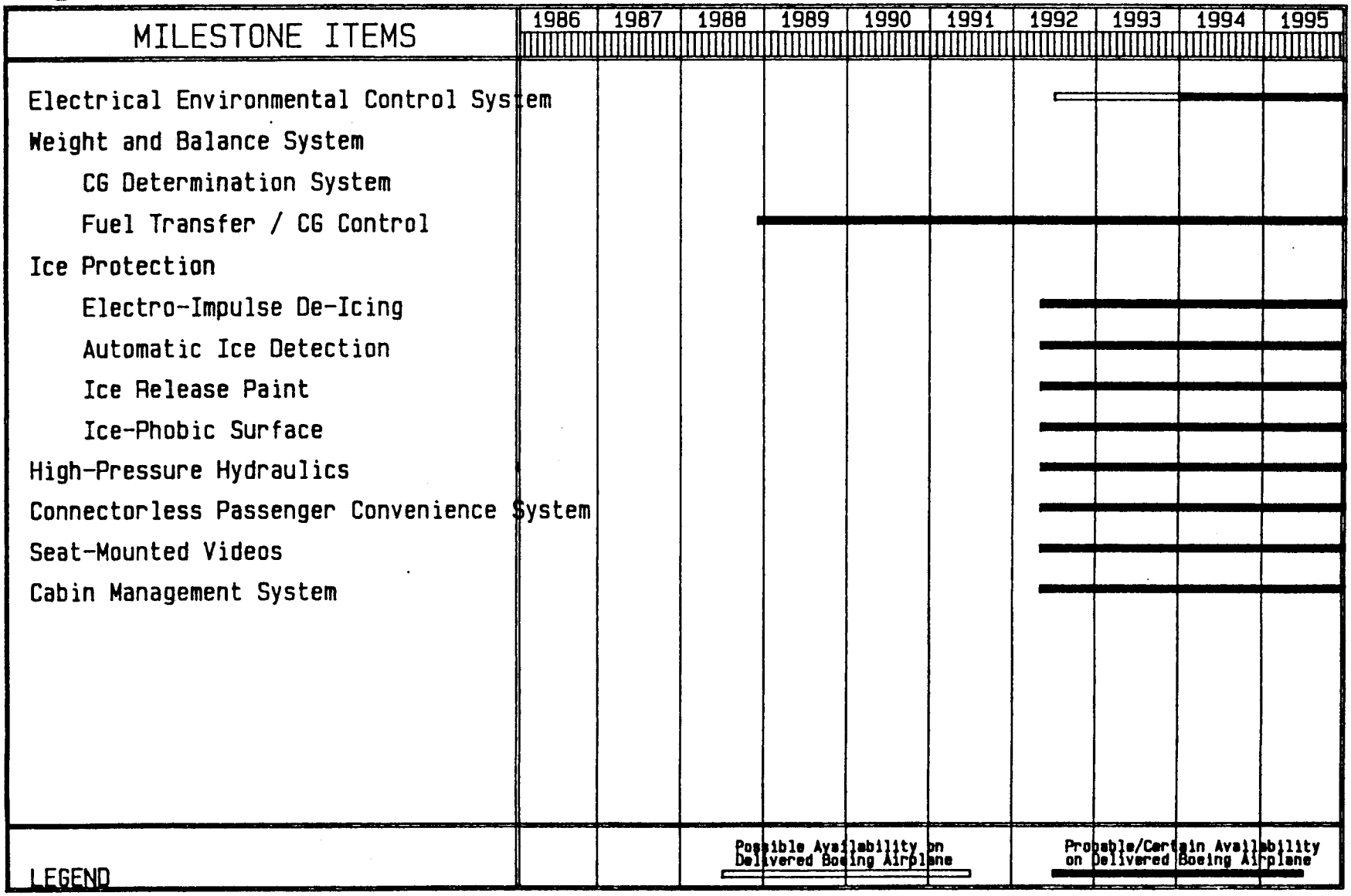
Possible Availability on Delivered Boeing Airplane

Probable/Certain Availability on Delivered Boeing Airplane

AS OF 19 DEC 1986

CHART NO. XSYST3

SYSTEMS



AS OF 19 DEC 1986

CHART NO. XSYST4