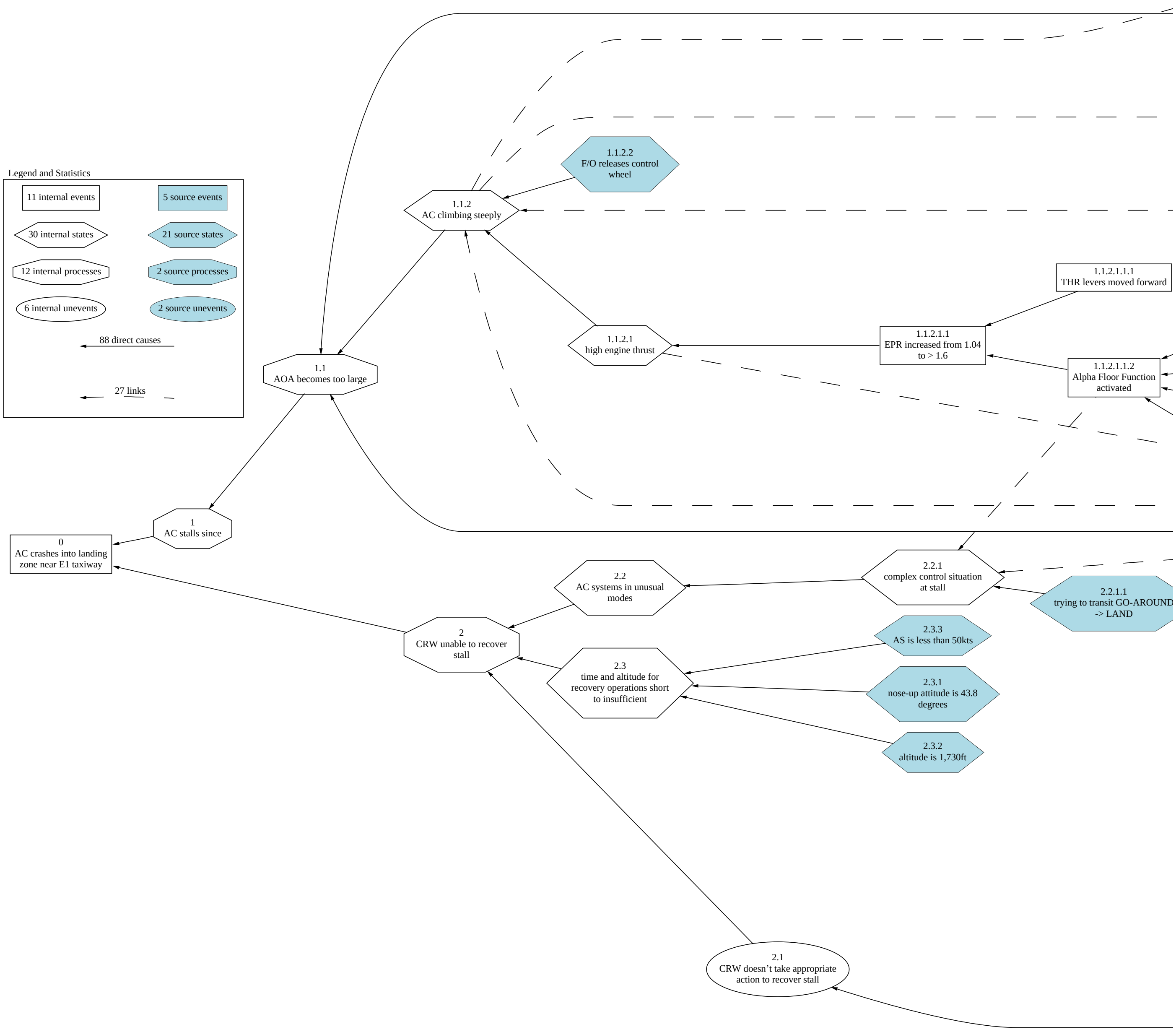
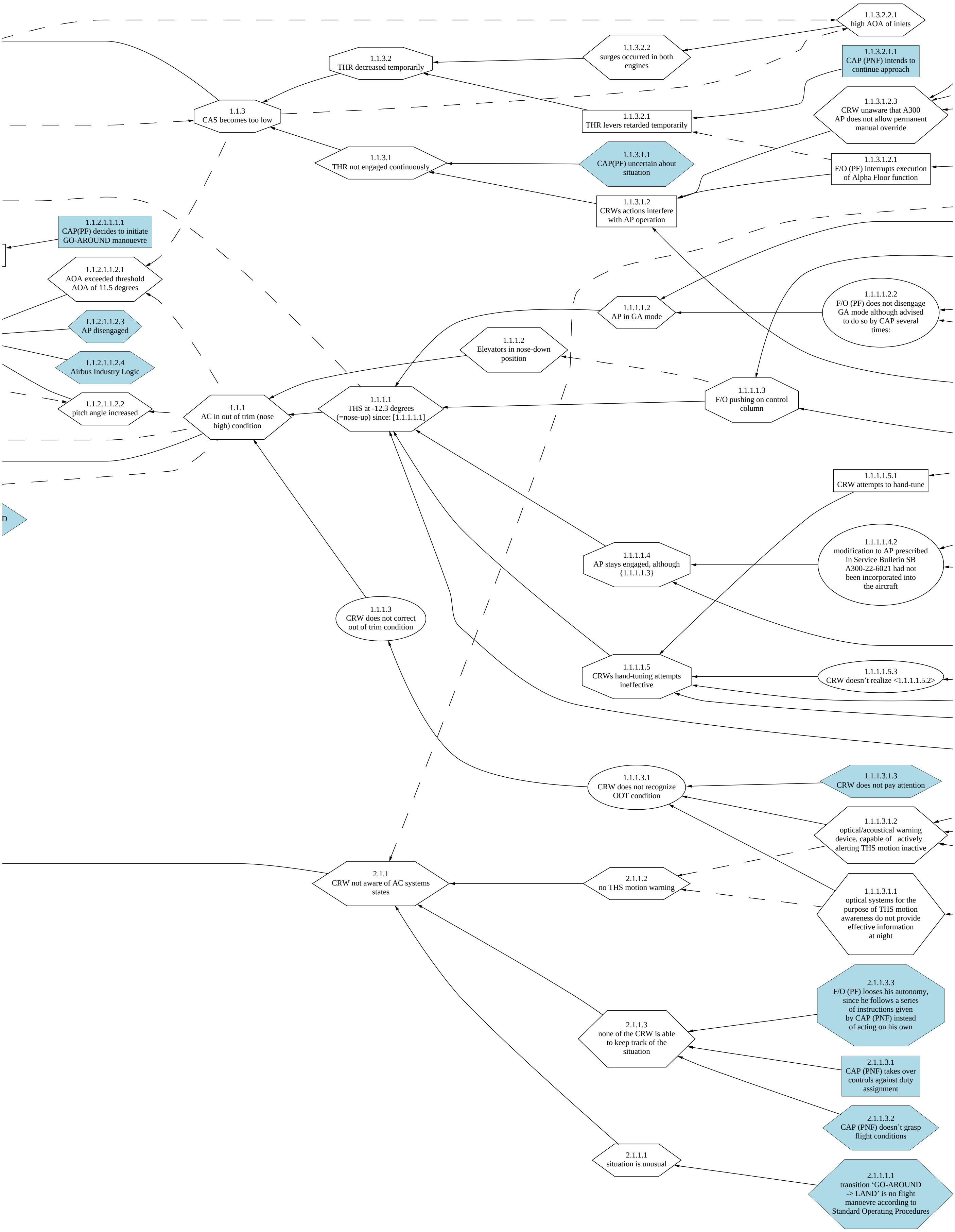
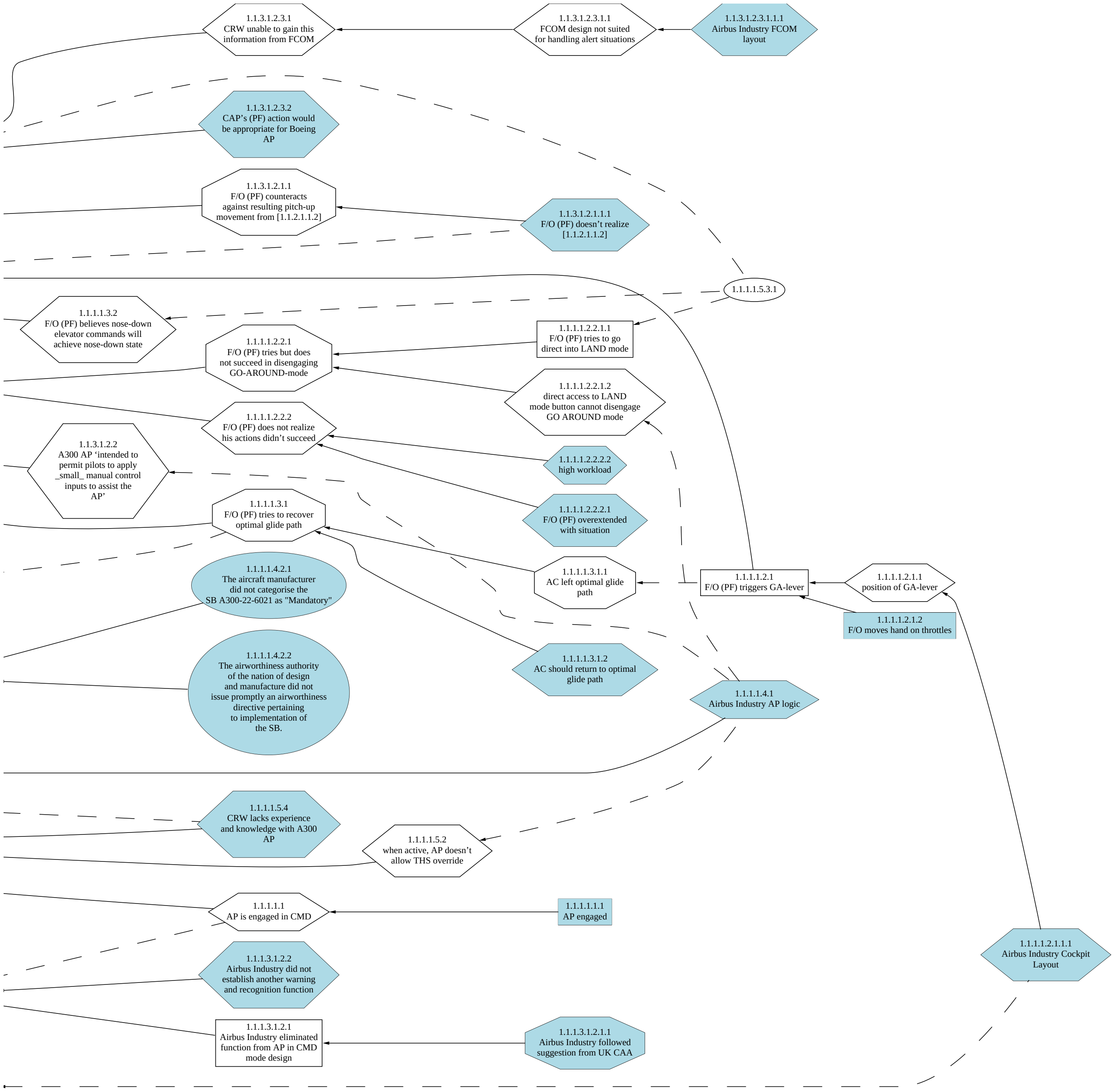


Legend and Statistics
11 internal events
5 source events
30 internal states
21 source states
12 internal processes
2 source processes
6 internal unevents
2 source unevents
88 direct causes
27 links
0
AC crashes into landing zone near E1 taxiway
1
AC stalls since
1.1
AOA becomes too large
1.1.2
AC climbing steeply
1.1.2.2
F/O releases control wheel
1.1.2.1
high engine thrust
1.1.2.1.1
EPR increased from 1.04 to > 1.6
1.1.2.1.1.1
THR levers moved forward
1.1.2.1.1.2
Alpha Floor Function activated
2
CRW unable to recover stall
2.2
AC systems in unusual modes
2.2.1
complex control situation at stall
2.2.1.1
trying to transit GO-AROUND -> LAND
2.3
time and altitude for recovery operations short to insufficient
2.3.3
AS is less than 50kts
2.3.1
nose-up attitude is 43.8 degrees
2.3.2
altitude is 1,730ft
2.1
CRW doesn't take appropriate action to recover stall


1.1.3.2.2.1
high AOA of inlets
1.1.3.2
THR decreased temporarily
1.1.3.2.2
surges occurred in both engines
1.1.3.2.1.1
CAP (PNF) intends to continue approach
1.1.3
CAS becomes too low
1.1.3.2.1
THR levers retarded temporarily
1.1.3.1.2.3
CRW unaware that A300 AP does not allow permanent manual override
1.1.3.1
THR not engaged continuously
1.1.3.1.1
CAP(PF) uncertain about situation
1.1.3.1.2.1
F/O (PF) interrupts execution of Alpha Floor function
1.1.3.1.2
CRWs actions interfere with AP operation
1.1.2.1.1.1.1
CAP(PF) decides to initiate GO-AROUND manouevre
1.1.2.1.1.2.1
AOA exceeded threshold AOA of 11.5 degrees
1.1.1.1.2
AP in GA mode
1.1.1.1.2.2
F/O (PF) does not disengage GA mode although advised to do so by CAP several times:
1.1.2.1.1.2.3
AP disengaged
1.1.1.2
Elevators in nose-down position
1.1.2.1.1.2.4
Airbus Industry Logic
1.1.1.1.3
F/O pushing on control column
1.1.1.1
THS at -12.3 degrees (=nose-up) since: [1.1.1.1.1]
1.1.2.1.1.2.2
pitch angle increased
1.1.1
AC in out of trim (nose high) condition
1.1.1.1.5.1
CRW attempts to hand-tune
D
1.1.1.1.4
AP stays engaged, although {1.1.1.1.3}
1.1.1.1.4.2
modification to AP prescribed in Service Bulletin SB A300-22-6021 had not been incorporated into the aircraft
1.1.1.3
CRW does not correct out of trim condition
1.1.1.1.5
CRWs hand-tuning attempts ineffective
1.1.1.1.5.3
CRW doesn't realize <1.1.1.1.5.2>
1.1.1.3.1
CRW does not recognize OOT condition
1.1.1.3.1.3
CRW does not pay attention
1.1.1.3.1.2
optical/acoustical warning device, capable of _actively_ alerting THS motion inactive
2.1.1
CRW not aware of AC systems states
2.1.1.2
no THS motion warning
1.1.1.3.1.1
optical systems for the purpose of THS motion awareness do not provide effective information at night
2.1.1.3.3
F/O (PF) looses his autonomy, since he follows a series of instructions given by CAP (PNF) instead of acting on his own
2.1.1.3
none of the CRW is able to keep track of the situation
2.1.1.3.1
CAP (PNF) takes over controls against duty assignment
2.1.1.3.2
CAP (PNF) doesn't grasp flight conditions
2.1.1.1
situation is unusual
2.1.1.1.1
transition 'GO-AROUND -> LAND' is no flight manoevre according to Standard Operating Procedures


1.1.3.1.2.3.1
CRW unable to gain this information from FCOM
1.1.3.1.2.3.1.1
FCOM design not suited for handling alert situations
1.1.3.1.2.3.1.1.1
Airbus Industry FCOM layout
1.1.3.1.2.3.2
CAP's (PF) action would be appropriate for Boeing AP
1.1.3.1.2.1.1
F/O (PF) counteracts against resulting pitch-up movement from [1.1.2.1.1.2]
1.1.3.1.2.1.1.1
F/O (PF) doesn't realize [1.1.2.1.1.2]
1.1.1.1.5.3.1
1.1.1.1.3.2
F/O (PF) believes nose-down elevator commands will achieve nose-down state
1.1.1.1.2.2.1
F/O (PF) tries but does not succeed in disengaging GO-AROUND-mode
1.1.1.1.2.2.1.1
F/O (PF) tries to go direct into LAND mode
1.1.1.1.2.2.1.2
direct access to LAND mode button cannot disengage GO AROUND mode
1.1.1.1.2.2.2
F/O (PF) does not realize his actions didn't succeed
1.1.1.1.2.2.2.2
high workload
1.1.3.1.2.2
A300 AP 'intended to permit pilots to apply _small_ manual control inputs to assist the AP'
1.1.1.1.2.2.2.1
F/O (PF) overextended with situation
1.1.1.1.3.1
F/O (PF) tries to recover optimal glide path
1.1.1.1.3.1.1
AC left optimal glide path
1.1.1.1.2.1
F/O (PF) triggers GA-lever
1.1.1.1.2.1.1
position of GA-lever
1.1.1.1.2.1.2
F/O moves hand on throttles
1.1.1.1.4.2.1
The aircraft manufacturer did not categorise the SB A300-22-6021 as "Mandatory"
1.1.1.1.3.1.2
AC should return to optimal glide path
1.1.1.1.4.2.2
The airworthiness authority of the nation of design and manufacture did not issue promptly an airworthiness directive pertaining to implementation of the SB.
1.1.1.1.4.1
Airbus Industry AP logic
1.1.1.1.5.4
CRW lacks experience and knowledge with A300 AP
1.1.1.1.5.2
when active, AP doesn't allow THS override
1.1.1.1.1
AP is engaged in CMD
1.1.1.1.1.1
AP engaged
1.1.1.1.2.1.1.1
Airbus Industry Cockpit Layout
1.1.1.3.1.2.2
Airbus Industry did not establish another warning and recognition function
1.1.1.3.1.2.1
Airbus Industry eliminated function from AP in CMD mode design
1.1.1.3.1.2.1.1
Airbus Industry followed suggestion from UK CAA