붙임 1 : 조종실 음성녹음 기록

(Cockpit Voice Recorder Transcript)

총 17쪽

Local T.	SRC	CH's	Contents

Contents

10:49:31.5	ATIS	2	Visibility two miles rain fog, sky condition three octa five hundred, six [ATIS broadcasting]
10:49:54.7	ATIS		···18 right··· (ATIS broadcasting)
10:50:17.0	OBS		听不清. ((잘 들리지 않는데.)) (I can't hear it clearly.)
10:50:21.1	ATIS		International airport information oscar
10:50:24.5	F/O	2	根本听不清. ((분명히 잘 들리지 않는데.)) (I can't hear it clearly at all.)
10:50:30.8	ATIS	3	Two miles rain fog, sky condition three octa five hundred, six octa one thousand, eight octa two thousand five hundred temperature one six, dew point one three, altimeter three zero zero zero, active runway three six left, advisory runway
10:50:59.9	ATIS	1 2 3 4	Gimhae international airport information oscar, time at zero one two eight UTC, weather wind two three zero at six knots, visibility two miles rain fog, sky condition three octa five hundred, six octa one thousand, eight octa two thousand five hundred temperature one six, dew point one three, altimeter three zero zero zero, active runway three six left, advisory runway three six right or one eight left will be used as taxiway and parallel taxiway will be closed.
10:52:13.4	ATIS	1 2 3	Advise you have information oscar ... Gimhae international airport···dew point one three, altimeter
10:52:20.9	OBS	2	给的是什么? ((우리한테 어떤 데이터가 주어 졌죠?)) (What data were we given?)
10:52:23.2	OBS	2	三千 ((3000.)) (Three thousand.)
10:52:35.0	OBS	1 2	18度. 36L,我听到 ((나는 18도, 활주로 36L로 들었음.)) (Eighteen degrees, three six left, I heard.)
10:52:47.7	OBS	2 4	三千. ((3000.)) (Three thousand.)

10:52:58.3	OBS	2	
10:53:01.0	OBS	2 3 4	8度 (

((18도?))

(Eighteen degrees?)

| 10:53:02.2 | F/O | 2 3 | 16度吧. |

((16도.))

(Sixteen degrees.)

| 10:53:06.0 | ATIS | 2 | Weather wind two three zero at six knots, visibility two miles rain fog, sky condition three octa five hundred,... |

| 10:53:26.3 | OBS | 2 | 18度, 露点16. |

((18도, 노점온도 16.))

(Eighteen degrees, dew point one six.)

| 10:54:53.5 | F/O | 3 | 预计雷达引导左三边. |

((레이더 벡터 받아 좌측 다운윈드로 진입이 예상되고.))

(Expect radar vectors to left downwind.)

| 10:55:05.8 | F/O | 3 4 | 过渡高度… |

((전이고도...))

(Transition level ...)

| 10:55:07.7 | F/O | | 213… |

((213...))

(Two one three.)

| 10:55:10.9 | F/O | 3 | 复飞. |

((복행.))

(Go around.)

| 10:55:13.7 | F/O | 3 | 如果复飞我们将…经过…VOR经向线飞向 KACHI. |

((그리고 만약 복행 할 경우... 우리는... VOR 레이디얼 320으로 KACHI까지 비행을 계속할것이다.))

(If I missed approach...we will fly to .via VOR radial three two zero to KACHI.)

| 10:55:26.6 | F/O | 3 | 等待5000. |

((5000피트로 대기.))

(Holding altitude five thousand feet.)

| 10:55:32.4 | F/O | 3 | 盲降频率108.5. |

((ILS 주파수는 108.5.))

(ILS frequency is one zero eight point five

10:55:34.6 F/O   3   Zero zero one.

10:55:37.6 F/O   3   没有远近台, VOR113.8 带DME.

((OM, IM 없음, VOR은 113.8 DME가 있음.))

(No outer marker, no inner marker. VOR one one three point eight with DME.)

10:55:44.6 F/O   3   北部安全高度5100.

((북쪽 안전고도는 5100.))

(Safe altitude in north is five one zero zero.

10:55:46.6 F/O   3   西南安全高度3700.

((남서쪽 안전고도는 3700.))

(Southwest safe altitude is three thousand seven hundred feet.

10:56:12.4 F/O   3   进近检查单.

((접근 점검항목.))

(Approach checklist.)

10:56:13.7 F/O   3   增压, 调定.

((기내압력 조정.))

(Cabin pressure set.)

10:56:14.1 CAP   3   调好.

((OK.))

(OK.)

10:56:15.0 F/O   3   空速游标.

((목표속도 셋.))

(Target speed setting.

10:56:16.9 CAP   4

((127.))

(One two seven.)

10:56:18.7 F/O   3   高度表.

((고도계수정치 셋.))

(Altimeter setting.)

10:56:21.3 CAP   3   调3000.

((3000으로 셋.))

(Set to three thousand.

10:56:23.7	F/O	3	无线电导航仪表.
			((무선항법 점검.))
			(Radio navaids check.)
10:56:25.4	CAP	3	检查好.
			((검사, OK.))
			(Check, OK.)
10:56:27.6	F/O	3	自动刹车选择.
			((오토브레이크 선택.))
			(Autobrake select
10:56:28.4	CAP	3	
			((2.))
			(Two.)
10:56:28.7	F/O	2 3	再现检查.
			((재현검사.))
			(Recall.)
10:56:30.3	CAP	3	检查完.
			((검사 완료.))
			(Check completed.)
10:56:30.4	F/O	3	进近检查单完成.
			((접근 점검항목 완료.))
			(Approach checklist completed.)
10:56:34.4	OBS	1 2	通播给的是英寸汞柱.
			((ATIS에서 준 것이 인치-헥토파스칼 인가?))
			(ATIS gives us inches-hectopascals?)
10:56:53.2	ATIS	4	...left will used at taxiway and parallel taxiway will be closed. Advice you have information oscar…. GIMHAE international airport information papa, time at zero two zero zero
10:57:05.4	F/O	3	我听到16度.
			16도로 들었는데.))
			(I heard temperature is one six
10:57:09.8	F/O	2 3 4	INCHEON control, Air China 129, ready for descent.
10:57:12.9	OBS	1 2	通播改为"P."
			((ATIS가 "P"로 변했군.))
			(Information changed to papa.)

10:57:13.9	ACC	1 2 3 4	Air China 129, descend to flight level two three zero initially
10:57:19.0	F/O	2 3 4	Initially two three zero Air China 129.
10:57:22.3	F/O	3	下降 230. ((230으로 강하.)) (Descend to two three zero.
10:57:22.7	OBS	2 3 4	调230. ((230으로 조정.)) (Select altitude to two three zero.)
10:57:25.3	ATIS	4	GIMHAE international airport information papa, time at zero two zero zero UTC ⋯, visibility two miles rain fog, sky condition one eight of the sky obscured by fog ⋯, temperature one six dew point one three, altimeter three zero zero zero ⋯
10:57:35.9	ATIS	3 4	Zero zero zero advise you have information papa.
10:57:53.2	ATIS	1 2 3	GIMHAE international airport information papa, time at zero two zero zero UTC ⋯
10:58:36.6	F/A	3	请讲, 25分, 16度, 谢谢. ((말씀하세요, 25분, 16도, 감사합니다.)) (Arrival time twenty-five, temperature one six
10:58:42.1	OBS	1 2 4	通播"P", 16度. ((ATIS 정보는 "P", 16도.)) (Information papa, sixteen degrees.)
10:58:45.0	OBS	2	36L. ((36L.)) (36L.)
10:59:21.0	OBS		到早了. ((좀 일찍 도착했군.)) (We have arrived earlier.)
10:59:22.9		3	[Sound similar to that of seat adjustment.]
:00:22.1	F/O	2 3 4	Incheon control, Air China 129, reaching two three zero ready for further descent.
11:00:32.9	ACC	1 2 3 4	Air China 129, descend to flight level one...seven zero
11:00:38.5	F/O	2 3 4	Descend to level one seven zero, Air China 129.
1:00:42.4	F/O	3	下降到170. ((170으로 강하.))

			(Descend to one seven zero.
11:00:42.7	OBS	2 3	170调好.
			((170으로 조정.))
			(Select altitude to one seven zero.
11:01:01.5	OBS	1 2	我来通讯.
			((내가 통신을 맡겠습니다.))
			(I will do communicating.)
1:01:04.8	OBS	2	你们监听，我来釜山来得少.
			((당신들은 잘 들으시오, 부산에 온 적이 적은데.))
			(Others keep listening. I came to Busan not too often.)
11:02: .8	ACC	1 2 3 4	Air China 129, descend to flight level one nine zero.
11:02:15.4	OBS	2 3 4	Continue flight level one nine zero, Air China 129.
11:02:20.5	OBS	1 2	保持190.
			((190유지.))
			(Maintain level one nine zero.)
11:02:39.3	OBS	2	把速度调下来.
			((속도를 줄이세요.))
			(Reduce speed.)
1:03:05.6	ACC	1 2 3 4	Air China 129, descend to flight level one seven zero.
11:03:08.6	OBS	1 2 3 4	Descend to flight level one seven zero, Air China 129.
11:03:14.2	OBS	1 2	继续下170.
			((계속해서 170으로 강하.))
			(Continue down to level one seven zero.
11:03:34.2		2 3 4	.[Sound similar to that of morse code]
11:04:02.4	OBS	1 2	盲降是对的.
			((ILS 식별이 정확하다.))
			(ILS identifier is correct.)
11:04:53.0	OBS	1 2 3 4	Control, Air China 129, maintaining flight level one seven zero.
11:04:57.8	ACC	2 3 4	Air China 129, standby.
11:06:04.	F/O	3	我看到的点，在这儿…
			((내가 본 지점은, 여기에서))
			(The point that I saw, here .
11:06:09.1	F/O	3	在那.
			((저기.))

(There.)

11:06:11.3	CAP	4	我感觉得少指挥按这个航线飞，头一回.

(이런 장주로의 지시는 드물다고 느끼는데, 처음이다.)

(I feel it is seldom to be instructed to fly this traffic route, it is the first time.)

11:06:17.2 ACC 1 2 3 4 Air China 129, contact Gimhae approach, one two five decimal five, good day.

11:06:21.7 OBS 2 3 4 One two five decimal five, good day, Air China 129.

11:06:25.6 OBS 2 125.5.

((125.5.))

(One two five decimal five.

11:06:30. OBS 1 2 3 4 GIMHAE approach, Air China 129, good morning, maintaining flight level one seven zero, with you.

11:06:38.3 APP 1 2 3 4 Air China 129, Gimhae approach, fly heading one nine zero, descend to six thousand.

1:06:44.6 OBS 1 2 3 4 Roger, turn heading one nine zero and descend to six thousand, Air China 129.

11:06:51.2 F/O 3 航向190，航线选择.

((헤딩 190, 헤딩선택.))

(Heading one nine zero, heading select.

11:06:52.9 APP 1 2 3 4 Air China 129, verify you have information papa.

11:06:57.5 OBS 2 3 4 Information papa received, Air China 129.

11:07:00.9 APP 2 3 4 Air China 129, roger, active runway three six left, expect straight-in approach.

11:07:07.2 OBS 1 2 3 4 Roger, Air China 129.

11:07:09.2 OBS 1 2 下降6000.

((6000으로 강하.))

(Descend to six thousand feet.

1:07:55.0 OBS 2 3 4 BUSAN approach, Air China 129, confirm visual approach runway three six left?

11:08:00.8 APP 1 2 3 4 Air China 129, three six left, Gimhae active runway three six left in use.

11:08:06.8 OBS 2 3 4 Roger, Air China 129.

11:08:10.7 OBS 2 就是目视进近.

((바로 비주얼 접근이다.))

			(That means visual approach.)
11:08:21	F/O	3	高度表调定3000.
			((고도수정치 3000.))
			(Altimeter set three thousand.)
1:08:35.4		4	[Sound similar to that of map]
11:08:50.0	APP	1 2 3 4	Air China 129, request approach category.
11:08:55.2	OBS	1 2 3 4	Please say again.
11:08:57.0	APP	1 2 3 4	Air China 129, request approaching category.
11:09:01.0	F/O	3	进近类别 "C."
			((접근범주 "Charlie."))
			(Approach category "Charlie.")
11:09:02.3	OBS	2 3	什么?
			((뭐라고?))
			(What?)
11:09:06.6	OBS	1 2 3 4	Charlie, Air China 129.
11:09:10.0	APP	1 2 3 4	Air China 129, roger copy, this time active runway change one eight right, wind two one zero at one seven knot, expect circling approach one eight right.
1:09:21	F/O	3	反向进近跑道18右.
			((선회접근착륙 활주로 18R.))
			(Circle approach runway one eight right.
11:09:22.4	OBS	1 2 3 4	Circle approach one eight right, Air China 129.
11:09:29.6	APP	2 3 4	Air China 129, confirm your category is Charlie or Delta?
11:09:35.4	CAP	4	"C" 类.
			((접근범주 "Charlie."))
			(Category "Charlie.")
11:09:36.3	OBS	2	Charlie, Air China 129, Charlie.
11:09:39.6	APP	1 2 3 4	Air China 129, roger.
11:09:43.7	CAP	3 4	220度, 多少海里? 十多海里.
			((바람방향은 220도인데 얼마나 세지? 십 몇 노트?))
			(Wind direction is two two zero, but how much? more than ten knots?)
11:09:55.	F/O	3	万尺.
			((10000피트.))

(Ten thousand feet.)

| 11:10:03. | APP | 1 2 3 4 | Air China 129, turn left heading one eight zero, descend to four thousand feet. |

11:10:07　OBS　1 2 3 4　Turn left one eight zero Air China 129, descend to four thousand.

11:10:19.2 CAP　　　4　18右, 转圈的.

((그러니까 과연 18R이군.))

(That means we are using runway one eight right.)

10:35.7 F/O　　3　MDA是七百尺.

((최저강하고도는 700피트.))

(MDA is seven hundred feet.)

11:10:39.6 CAP　1　　4　果然是18号, 18右, 目视.

((자 우리 18번으로 사용하고, 18R, 비주얼.))

(We are really using one eight, one eight right visual.)

11:10:47.2 F/O　　3　就是六百八十?

((그러니까 680?))

(This means six hundred eighty?)

1:10:50.6 F/O　　3　六百八十几?

((680 얼마?))

(Six hundred eighty what?)

1:10:52. F/O　　3　看一下.

((보시오.))

(Take a look.

11:10:55.8 CAP　　　4　六百八十七, 七百

((687, 700입니다.))

(Six hundred eighty seven, seven hundred

11:11:14.0 CAP　1　　4　早点做完就完.

((미리미리 조치하는 게 좋지.))

(It's all right to have it done earlier.)

11:11:23.2 F/O　1　3 4　看那边滑行道.

((저쪽 유도로 좀 보세요.))

(Look at that side taxiway.)

11:11:24.7 F/O　　3　这边的叫什么?

((이쪽은 뭐지?))

(What is this side called ?)

1 11:30.3 CAP   2 3 4   C6 出来就是 E4.

((C6로 나오면 곧 E4이고.))

(Comes out of Charlie six is Echo four.

11:11:33.6 F/O   3   是那个斜的吗?

((그 대각선 말입니까?))

(Is that the diagonal one?)

11:11:34.2 CAP   直接退出, C6出来就是 E4,C6 C7都行

((직접 빠져나오거나, C6로 나오면 E4이고 C6 C7 모두 괜찮다.))

(Vacate the runway directly or come out of Charlie six is Echo four or use Charlie six, Charlie seven.)

11:11:37.4 CAP   4   如果是关了就是跑道头, C5肯定是关了.

((만약에 막혀있으면 활주로 끝으로 나오고, C5는 분명히 막혀있고.))

(If it is closed, possibly we will use end of the runway, Charlie five is closed for sure.)

11:11:45.3 CAP   C6,C7 不知道

((C6, C7은 모르겠음.))

(We don't know Charlie six and Charlie seven.)

12:27.2 CAP   4   航线不能做大了, 那边全是山.

((우리는 장주패턴을 넓게 하면 안 되는데, 저쪽은 전부 산이야.))

(We won't enlarge the traffic pattern, the mountain is all over that side.)

11:12:29.0 F/O   3   对.

((맞습니다.))

(Right.)

11:13:00.5 CAP   4   下雨了, 本场没有报有雨啊?

((어 비가 오는군, 우리는 비온다는 정보가 없었는데?))

(it's raining, we didn't receive any information on rain?)

11:13:15.3   2 3   [4 beeps]

11:13:34.6 F/O   3   襟翼 1?

((플랩 1?))

(Flaps one?)

11:13:35.1 CAP   4   好的, 放.

((OK, 내려.))

(OK, extend.)

1:13:35.9   Clicks [possibly flaps related]

11:13:58.7 APP   1 2 3 4   Air China 129, turn left heading one six zero, descend to two thousand six hundred.

11:14:03.4 OBS   1 2 3 4   Turn left heading one six zero, descend to two thousand six hundred feet, Air China 129.

11:14:15.0 OBS   2   左转160, 下降2600.

((160도로 좌측선회, 2600으로 강하.))

(Turn left heading one six zero, descend to two thousand six hundred feet.)

11:14:37.0   1 2 3 4   [multiple clicks.]

1 4:47. CAP   4   拿下眼鏡适应适应.

((안경 벗고 밖에다 눈을 좀 적응시켜야겠는데.))

(I will take off my sunglasses, let my sight adjust to outside.

11:15:02.5 CAP   4   能见度不怎么样.

((시정이 안 좋은데.))

(The visibility is not so good.)

11:15:14.8 APP   1 2 3 4   Air China 129, turn left heading zero nine zero.

15:19.1 OBS   1 2 3 4   Turn left heading zero nine zero, Air China 129.

11:15:23.3 OBS   2   左转90度.

((90도로 좌측선회.))

(Turn left heading zero nine zero.)

11:15:28.0 CAP   4   雨区阿.

((비가 오는 지역인데.))

(It's the rainy area.)

1:15:51.1 CAP   4   放.

((내려.))

(Extend.)

1 15:51.6 F/O   3   襟翼5.

((플랩5.))

(Flaps five.)

16:02.4   2 3 4   Clicks. [possibly flaps related]

1:16:05.4 CAP   4   这么大风

((바람이 센데.))

(The wind is so strong.)

11:16:33.4	APP	2	Air China 129, turn left heading zero three zero, cleared for ILS DME runway three six left, then circle to runway one eight right, report field in sight.

1 16:41.8 OBS 2 Turn left heading zero three zero, cleared [unintelligible] approach one eight right, Air China 129.

11:16:49.7 CAP 4 反向.

((선회접근착륙.))

(Circle to land.)

11:16:53.8 F/O 3 反向,可以盲降36L,反向落地18R,看到跑道叫.

((선회접근착륙, ILS 36L로 접근허가, 그런 다음 활주로 18R로 선회 접근착륙, 활주로 보이면 보고.))

(Circle to land, cleared for ILS approach three six left, and then circle to land one eight right, report runway in sight.)

1:16:54.6 OBS 2 好的,好的, 明白, 18R, circle to land.

((OK, OK, 알겠음, 18R, 선회접근착륙.))

(OK, OK, I understand, circle to land one eight right.

1 17:05.3 OBS 2 左转030.

((30도로 죄측선회.))

(Turn left zero three zero.

11 7:06.8 1 2 3 4 [Metallic noise.]

11:17:10.7 F/O 3 下一点, 快到了.

((좀 더 강하, 거의 다 왔음.))

(Little more descent, position almost reached.

11 7:17.5 F/O 3 按盲降...

((ILS 잡혔네...))

(ILS captured...)

11:17:29.8 CAP 4 是不是要保持这个高度呀?

((이 고도를 유지해야 하는가?))

(Do we have to maintain this altitude?)

11:17:30.9 F/O 3 不保持.

((유지하지 말고.))

(Do not maintain.)

7:33.2 F/O	3	下七百. ((700으로 강하.)) (Continue down to seven hundred feet.)
7:39.5 F/O	3 4	风太大,放轮? ((바람이 너무 세다, 착륙기어 내려요?)) (Too strong wind, gear down?)
11:17:42.1		[Sound similar to that of landing gear being extended]
1:17:47.3 CAP	4	放轮, 襟翼20? ((착륙기어 내림, 플랩 20 ?)) (Gear down, flaps twenty?)
11:17:48.9 F/O	3	襟翼20. ((플랩 20.)) (Flaps twenty.)
1 17:50.0		Clicks [possibly flaps related]
11:17:54.4 APP	1 2 3 4	Air China 129, descend to seven hundred.
11:17:57.2 OBS	2 3 4	Seven hundred, Air China 129.
11:18:00.3 OBS	2 4	下降700. ((700으로 강하.)) (Descend to seven hundred feet.)
1:18:28.7 APP	1 2 3 4	Air China 129, report field in sight.
11:18:34. OBS	2 3 4	Runway not in sight, Air China 129.
11:18:39.0 CAP	4	Runway in sight.
1:18:40.5 OBS	1 2 3 4	Runway in sight, Air China 129.
18:43.7 APP	2	Air China 129, contact tower one eighteen point one, circle west.
1 18:47.4 OBS	2 3 4	Circle, circle, one eight right, Air China 129.
11:18:48.4 CAP	4	脱开, 左转. ((디스컨넥트, 좌측선회.)) (Disconnect, turn left.)
11:18:52.5 F/O	4	我来. ((내가 조종한다.)) (I have control.)
11:18:53.3 F/O	3	航向选择. ((헤딩선택.))

(Heading select.)

1 :18:55.2   1 2 3 4   Several beeps [sound similar to that of inner/middle marker]

11:18:56.5 CAP   3 4   好了，保持700，注意高度阿

((됐다,700 유지, 고도 주의해.))

(OK, maintain seven hundred feet, watching the altitude.

11:19:02.9 OBS   1 2   18右 转圈的

((활주로 18R, 선회접근.))

(One eight right, it is circling.)

11:19:07.6   4   Glide Slope [aural warning]

11:19:11.4 F/O   3 4   把盲降关了

((ILS를 꺼라.))

(Turn off the ILS.)

1 19:12.3 OBS   1 2 4   好的 关啦

((OK, 껐습니다.))

(OK, have it turned off

11:19:16.7 CAP

))

(Twenty seconds

1:19:18.5 F/O   3

((OK.))

(OK.)

11:19:33.2 CAP   4   看着跑道

((활주로 잘 지켜보고.))

(Keep watching the runway.

11:19:34.0 F/O   1 2 3   差不多，转吧.

((선회합시다.))

(Turning.)

11:19:41.0 F/O   3   再接上

((재연결.))

(Engage it again

11:19:43.4 OBS   1 2   高度700.

((고도 700.))

(Altitude seven hundred

14

1:19:44.8	F/O	3	现在是高度保持七百.
			((현재고도 700으로 유지.))
			(Maintain present altitude seven hundred feet.)
11:19:46.0	F/O	3	航向选择.
			((헤딩선택.))
			(Heading select.)
11:19:51.5	APP	1 2 3 4	Air China 129, contact tower, one eighteen one.
11:19:53.3			Beeps [beeping slowly increased then decreased in rate, continued until 11:20:40]
11:19:55.7	OBS	1 2 3 4	Contact tower one two one...one one eight decimal one, good day, Air China 129.
11:19:59.5	CAP	4	能看到跑道头吗?
			((활주로 끝과 나란한 지점을 보았나?))
			(Can you see abeam end of runway?)
11:20:01.0	F/O	3	切跑道头.
			((활주로 끝과 나란함.))
			(Abeam runway end.)
11:20:01	TWR	3 4	This is GIMHAE tower on guard, Air China 129, if you hear me contact one one eight point one.
11:20:01.8	CAP	4	计时.
			((타이밍.))
			(Timing.)
11:20:13.0	OBS	1 2 3 4	GIMHAE tower, Air China 129, circle approach one eight right.
11:20:13.1	F/O	3	风太大, 太难飞了.
			((바람이 너무 세다, 조종하기 힘든데.))
			(The wind is too strong, it is very difficult to fly.)
11:20:14.8	CAP	3	三转弯.
			((터닝베이스.))
			(Turning base.)
11:20:16.9	CAP	4	我来飞.
			((내가 조종할께.))
			(I have control.)
11:20:18.9	TWR	1 2 3 4	Air China 129, report turning base.
11:20:21.5	CAP	4	Turning right.

11:20:22.7	OBS	2 3	Wilco, Air China 129.

11:20:23.6 F/O 3 4 快转,别太晚了

((빨리 선회하고, 너무 늦지 않도록.))

(Turn quickly, not too late.)

11:20:25.0 TWR 1 2 3 4 Air China 129, check wheels down, wind two one zero at one seven knots, cleared to land runway three six left, not in sight.

:20:32.0 CAP 4 襟翼30 放了.

((플랩 30, 이미 내렸다.))

(Flaps 30, already extended

11:20:32.6 TWR 1 2 3 4 Cleared to land runway one eight right.

11:20:33.9 CAP 4 把速度调下来.

((속도를 줄여라.))

(Reduce speed

11:20:34.7 F/O 4 好的.

((OK.))

(OK.

:20:34.8 OBS 2 3 4 Circle, [unintelligible] one eight right and QNH three thousand, Air China 129.

1:20:41.3 TWR 2 3 4 Air China 129, can you landing?

11:20:47.1 OBS 2 3 4 Roger, QFE three thousand, Air China 129.

11:20:50.9 TWR 2 3 4 Air China 129, say again your intention.

11:20:54 CAP 3 4 帮我找一下跑道.

((활주로를 찾는데 도와줘.))

(Assist me to find the runway.)

11:20:54. F/O 3 4 注意高度.

((고도에 주의하고.))

(Pay attention to the altitude keeping.)

11:20:59.0 F/O 3 不太好飞了.

((비행하기 힘들어 지는데.))

(It's getting difficult to fly.)

11:21:01.9 F/O 3 4 注意高度.

((고도에 주의하고.))

(Pay attention to the altitude

:21:02. TWR 1 2 3 4 Air China 129, say position now.

11:21:05.2	OBS	1 2 3 4	Air China 129, on base
11:21:06.7	F/O	1 2 3 4	Turn on final.
11:21:08.	OBS	2 3 4	Turning on final, and QFE three thousand, Air China 129.
11:21:08.9	CAP	4	看到跑道了吗？

((활주로 봤나?))

(Have the runway in sight?)

11:21:10.4	F/O	3	没有，看不着.

((아니오, 안 보이는데요.))

(No, I can not see out.)

11:21 1.7	F/O	3	必须复飞.

((복행하시오.))

(Must go around.)

11:21:14.7	F/O	3 4	拉起来！拉起来！

((당겨! 당겨!))

(Pull up! Pull up!)

11:21:14.7	TWR	1 2 3 4	Cleared to land one eight right, Air China 129.
:21:17.0			[Sound of impact.]

17

붙임 1 1 : 3국이 서명한 수정된 조종실 음성녹음기록

(The Amended CVR Transcript Signed by 3 Parties)

총 6쪽

MINUTE OF JOINT MEETINTG

1. INTRODUCTION

For the purpose of clarification with respect to the doubtful words both in the transcript of CVR and air to ground communication between pilot of CCA129 and the controllers of GIMHAE ATC facilities. The Korean Accident Investigation Board (KAIB), the General Administration of Civil Aviation of China (CAAC) and NTSB had a joint meeting in NTSB headquarter from Feb, 25 to Feb, 26 During these two days, the three parties re-listened carefully to the CD-ROM copy of CVR and copy of air to ground communication with the assistance of NTSB technical experts. Some agreement was reached on the clarification of recordings Nevertheless, some doubtful words still remain since it was so difficult to clarify.

2. RESULTS

2.1 CVR

The CAAC believe that the original transcript of CVR signed by the three parties on 25th APR.2002 is correct and no changes to the transcript are required. The KAIB believe several words were wrong in the original transcript and suggested several changes which will

be attached to the original transcript.

2.2 ATC COMMUNICATION

After the carefully clarification, several changes to the transcripts were suggested by the CAAC and KAIB. The changes to the transcripts are attached to the original transcript
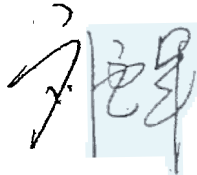
Korean Investigator

Mr. Kim Yong Sok
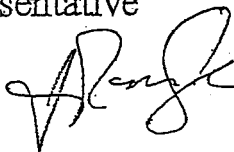
2/26/03

Chinese Investigator

Mr. Liu Ya Jun

26/.02/03

US Accredited Representative

Mr. Joseph M. Sedor

2/26/03

(

1. Korea(KAIB), China(CAAC) and US(NTSB) investigative team met at NTSB lab from Feb. 25 to 26, 2003 to review CVR recording and transcript.

2. The participants were
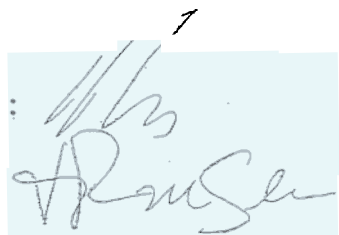
    KAIB : Shin myung-nam, Kim yong-sok, Min byung-woo.
    CAAC : Wang lifeng, Wu chengchang, Mao yanfeng, Xu sian
    NTSB : Joe Sedor, Dave Kirchgessner, Albert Reitan.

3. Korean investigative team (KAIB) suggested the following changes

Time	Spoken by	From	To
11:16:43	pilot	...Cleared visual approach	...Clear cleared approach18R
11:20:26	tower	.... Not in sight... correction RWY 18R	... Not in sight... cleared to land RWY 18R

4. U S investigative team (NTSB) proposes no changes to transcript

KOREA(KAIB) :

USA(NTSB)   JOSEPH SEDOR, US Acc Rep 2/26/03

The approach control audio recording was reviewed at US NTSB laboratories on February 25 and 26, 2003. The following changes were suggested:

CAAC investigative team:

1116'43"   P: Turn Left Heading 030 Clear Visual App 18R CCA129

1118'48"   C: CCA129 CTC Tower eighteen...circle west

All three investigative teams:

1118'52"   P: Circle, Circle 18R CCA129

Korean Investigator

Mr. Kim Yong Sok   2/26/03
Mr. Shin Myung Nam   2/26/03
Mr. Min Byung Woo   2/26/03

Chinese Investigator

Mr. Yajun Liu   26/02/03
Mr. Mao Yan Feng   2/26/03

NTSB Investigator

Ms. Barbara Zimmermann   Barbara Zimmermann 2/26/03

1

The control tower audio recording was reviewed at US NTSB laboratories on February 25 and 26, 2003. The following changes were suggested:

Add under 11 19'43"

> T: This is Gim Hae Tower on guard, CCA129, If you hear me contact 118.

Change

> P: WILCO, CLEARED TO LAND 18R AND QNH 3000 AT. CCA129

To

> P: CIRCLE, CLEARED TO LAND 18R AND QNH 3000 CCA129
> (Korean investigator)
>
> P: CIRCLE, CLEARED TO LAN EIGHT RIGHT AND QNH 3000 CCA129
> (YAJUN LIU / CAAC)
>
> P: CIRCLE APPROACH ONE EIGHT RIGHT AND_ QNH 3000 CCA129
> (MAO YAN FENG / CAAC),

Change

> P   CCA129

To

> P   QFE 3000 CCA129 (KAIB)
>
> P: Roger QFE 3000 CCA129 (CAAC)

Change

> T(Bae Dong Hoon): THIS IS GIM HAE TOWER ON GUARD CCA129 IF YOU HEAR
>   ME CONTACT 118.1 118.1 SAY POSITION NOW

To
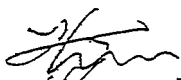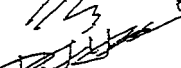
> T(Bae Dong Hoon): THIS IS GIM HAE TOWER ON GUARD CCA129 CCA129 IF YOU
>   HEAR ME GIMHAE COME UP FREQUENCY 118.1 118.1
>   GIMHAE TOWER ON GUARD OUT (ALL PARTIES)
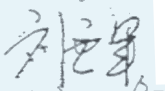
1

Korean Investigator

Mr. Kim Yong Sok   2/26/03
Mr. Shin Myung Nam
Mr. Min Byung Woo   2/26/03.

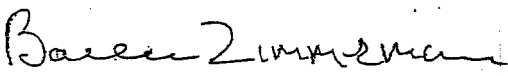Chinese Investigator

Mr. Yajun Liu   26/02/03
Mr. Mao Yan Feng   2/26/03

NTSB Investigator

Ms. Barbara Zimmermann   2/26/03