



ANDEX INTERNATIONAL

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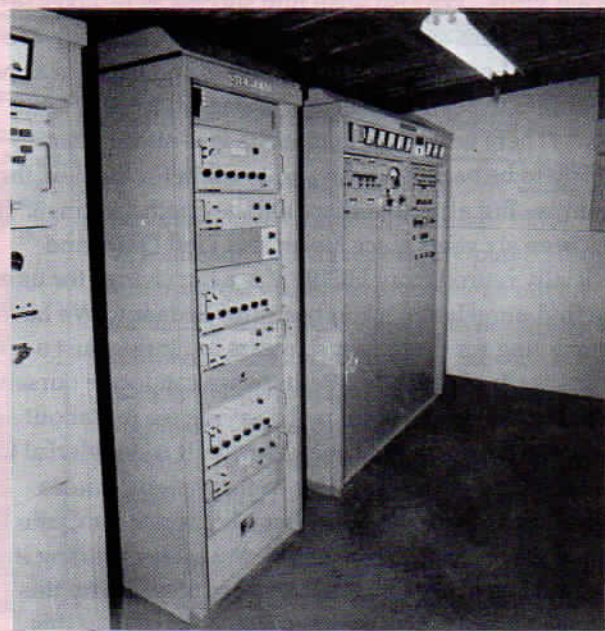
Vol. 17, No. 4
August-September 1990

HCJB Begins SSB Broadcasts

Something new has been added recently at HCJB that should be of great interest to DXers and shortwave listeners. For many years single-sideband transmission has been the preferred mode for transmitting voice by radio amateurs and many point-to-point circuits. Single-sideband has many advantages over standard AM transmission. Now HCJB is broadcasting some of its programs using SSB (single-sideband). On Monday, June 18, tests began with two SSB transmitters. Some of the frequencies used included 25,950, 21,470, 17,790, and 15,155 kHz.

Before going any further, perhaps we should explain how SSB works and how it differs from standard AM broadcasting. An ordinary AM signal consists of a powerful carrier and two sidebands. However, the sidebands carry all of the program information. In a sense the carrier power is wasted, but it is needed by an ordinary receiver to give an undistorted audio sound. Both sidebands carry the same program information so only one is really needed. A great deal of power can be saved by transmitting only one sideband and no carrier. Also, a single-sideband signal takes up only half the space of a standard AM signal in the radio spectrum. If all shortwave broadcasting were done using SSB it would be possible to fit twice as many stations in the same portion of any band with greatly reduced interference. All DXers would benefit from that improvement! In fact, a 30 kw SSB transmitter will give about the same effectiveness as a 100 kw AM transmitter. The economic advantages of SSB should be evident.

The major disadvantage of SSB broadcasting is that ordinary AM receivers will not work satisfactorily. Special receivers are needed and they are much more expensive at present. The receiver must generate a substitute carrier to replace the one not transmitted. This must be exactly the same as the carrier frequency that has been eliminated at the transmitter. While this may sound simple, it is



One of HCJB's SSB transmitters

really quite difficult in practice. It requires a very stable receiver since any drift in frequency, either at the transmitter or receiver, will cause serious distortion. Tuning is much more critical.

Recently four SSB transmitters became available to HCJB at very low cost. Three are now in Ecuador. The fourth is being used in Italy. The transmitters were obtained from the Swiss PTT which operates the Swiss Radio International station in Schwartzberg. These transmitters were used to communicate with aircraft while in flight. Since much of that communication is now done by satellite, the load on these transmitters has been greatly reduced. Of seven transmitters that were installed in 1970, four were no longer in service.

Although these transmitters were built in the 1960s by Siemens in Germany, their advanced design is considered quite modern even today. They

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Person to Person

Clayton Howard Interim ANDEX Director



We live in a world of change. This applies even to HCJB and ANDEX International. As Brent Allred mentioned in the last bulletin, he has left Ecuador and returned to his home country, New Zealand. We want to thank him for the great job he did as ANDEX Director during recent years. We also wish him success as he takes up his new duties as pastor of a church in Auckland. We know the Lord will continue to bless and use him as he continues to serve in this new capacity.

There will be still more changes ahead. I am happy to be back in Quito and to fill in for the next three months. But after that there will be another change. It has been six years since Helen and I left Quito and officially retired from HCJB. It is a big change for us as we find ourselves back in beautiful Ecuador. We have been living for these past six years in Florida, just a few miles north of Orlando. Perhaps we can locate ourselves better in the minds of many by saying we live about an hour's drive north of Disney World! It is wonderful to be back for even a short time in the majestic Andes Mountains. We have really been homesick for Quito. When we left Florida the temperature was running in the mid-90s every day. Just another reason why this change to cool Quito weather is so delightful at this time.

Politically, the world has changed tremendously even during the past few months. Who could have predicted the rapid changes in Eastern Europe? A year ago the demise of the Berlin Wall would have seemed an utter impossibility! Now we see a reunited Germany emerging which will no doubt be one of the leading powers in Europe in coming years. What unbelievable changes are taking place before our eyes! What will happen during the next few months and years? Only God knows.

As DXers, you are aware of the continuing changes in the field of electronics. How different and improved are the receivers used by DXers today. Who would want to go back to the clumsy radios of bygone days! Computers and other electronic miracles are changing the DXer's hobby almost on a daily basis. In another article in this bulletin you will read about tests HCJB is making with single-sideband transmissions. As better and cheaper receivers are developed, this could be

the wave of the future. And so changes continue!

Have you ever asked the question, "In a world of change, is there anything that is constant and unchangeable?" The answer is definitely "Yes." The Bible tells us that God is the same yesterday, today, and forever. He never changes. We can count on Him. His plan of salvation for everyone who accepts Jesus Christ as Savior will last for all eternity. HCJB will continue to broadcast this unchangeable message of hope as long as we have the breath to do so. Brent encouraged ANDEX members to make Christ their Savior and friend. I have the same message and so will whoever follows me as ANDEX Director. This is a message that can't be altered. It is open to you right now. Let Jesus Christ into your life and He will make a change that will turn your life around and get you on the right path. I hope you will take this important step. It will make a permanent change in your life!

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are capable of unattended operation with automatic tuning to any frequency between 3 and 30 MHz. They will operate as pure SSB transmitters or as AM units with controllable amounts of carrier added. In fact, we understand that the transmitter in Italy is being used as an AM broadcaster. The peak power of these units is rated at 30 kw. On many receivers the audio from a 30 kw SSB transmitter will sound louder than if it were coming from a 100 kw AM station.

The early single-sideband tests at HCJB were made using the upper sideband and with carrier added in amounts ranging from 5 to 50 percent. Listening tests in Quito resulted in a decision to operate with 20 percent carrier for the time being on regular transmissions. By the time this issue of ANDEX International reaches you, programming should be on a 24-hour basis, using two frequencies. These will probably be 25,950 and 21,458 kHz. Of the three transmitters now in Ecuador, only two are being prepared for regular operation. The third will serve as a source of spare parts.

The antennas currently in use for SSB broadcasts include an unterminated rhombic and a ground plane. The rhombic is bi-directional and can be used on frequencies between 15 and 26 MHz. It provides a good signal gain to Europe and the South Pacific. The ground plane is non-directional and can be used only on 11 meters, usually 25,950 kHz. In the future other antennas and frequencies may be added depending on the results of these early tests and listener response.

At present, with 20 percent carrier insertion, listeners who have only regular AM capability will notice considerable distortion. Speech should be understandable while music suffers bad distortion.

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PROGRAM

HCJB · THE VOICE OF THE ANDES · QUITO · ECUADOR

August-September 1990

The purpose of these "Program Notes" is to provide details of selected, upcoming HCJB-produced programs and other news concerning HCJB and, in particular, the English Service. All days are local days, as opposed to UTC days.

SALUDOS AMIGOS (Sundays)

This is HCJB's international friendship program, hosted by Ken MacHarg. Each week Ken calls listeners from around the world who have written to him. Join in the fun by dropping Ken a note and tuning in to *SALUDOS AMIGOS*.

DATELINE 90 (Mondays)

This new program captures and confronts the issues of the decade. Each week hostess Jan Shober brings you discussion, information and commentary designed to set you thinking.

September 3 - *DATELINE 90's* panel of singles considers the single life—the reality vs. the myths.

September 10 - Life Behind Bars: Is There Hope? Two men who have "helped" behind bars join *DATELINE 90* to shed light on the forgotten underside of our society—the prisoners.

September 17 - Dr. John Meyer, doctor in zoology, joins this edition of *DATELINE 90* considering Creation: A Religious Fairy Tale or A Scientific Alternative?

October 1 - Former White House aide Charles Colson contends that the West is on the verge of a new dark age. A *DATELINE 90* panel wrestles with the possibilities.

October 8 - The Creative Urge: Make It Your Own. Bob Young, professor in international education, joins *DATELINE 90* to discuss creativity.

October 22 - Even as a new breeze of openness sweeps the planet, the stench of ethnic hatred rises stronger than ever. *DATELINE 90* turns its focus toward this troubled arena.

October 29 - Listener's Forum. This edition will update stories since the last Forum (July 30) and air *DATELINE 90* listeners' comments. Details of a contest will also be announced.

HAPPINESS IS (Tuesdays and Thursdays)

Hostess Dee Baklenko presents interesting topics on this program. Every Tuesday Dee features topics related to the culture of Ecuador and South America—from the people who make up this fascinating country to history and places of interest. On Thursdays she offers a variety of topics and interviews.

HAM RADIO TODAY (Wednesdays)

John Beck presents this program on amateur radio. Whether you're a ham yourself, or just interested in amateur radio, you'll find plenty to catch your attention on this program.

MUSICA DEL ECUADOR (Fridays)

Jorge Zambrano hosts this program which includes his unique mixture of friendly chatter with Ecuadorian and Latin music. If you have a particular Ecuadorian song or music style you would like to hear, drop Jorge a note.

DX PARTY LINE (Saturdays)

This is HCJB's shortwave and communications program

September 1 - Come with us on a journey down the Inca trail as *DX PARTYLINE* focuses on DXing Peru. There will also be the monthly "Radio Stamps" feature with Neil Carleton.

September 8 - *DX PARTYLINE* profiles broadcasting in Uganda and reviews Panasonic's RF-B40 compact portable receiver. Cindy

Ellen Morgan will also join the program with this month's "ODXA Perspective."

September 15 - There are a number of computer programs available that can be used in conjunction with the Kenwood R-5000 receiver. *DX PARTYLINE* looks at some of them on today's program. Also featured will be the "Pacific DX Report" and the "SPEEDX Report."

September 22 - Like other East European countries, Romania is undergoing great change. *DX PARTYLINE* looks at the changes even taking place in the broadcast scene in Romania and also features reports from ANARC, SPARC and the EDXC.

October 6 - Join *DX PARTYLINE* to learn about "SNAP" at the Voice of America. What is it and how does it facilitate newswriting? Neil Carleton will also present more from the hobby of radio stamps.

October 13 - *DX PARTYLINE* profiles broadcasting in war-torn Cambodia and reviews Grundig's Cosmopolit portable shortwave receiver.

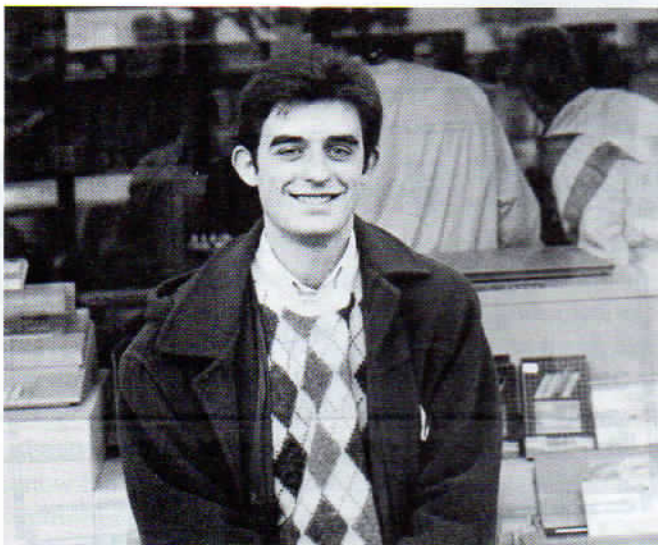
October 20 - Pitcairn Island may not have a shortwave broadcast station as such, but you can still hear signals from the island on the shortwave bands. Tune in to *DX PARTYLINE* today to find out how. The program will also feature the "Pacific DX Report" and the "SPEEDX Report."

October 27 - Reports from ANARC, SPARC and the EDXC will be included on today's program, as well as a profile of broadcasting in Surinam.

MUSICAL MAILBAG (Saturdays)

This is HCJB's mailbag program with a difference. We've taken the mailbag concept and turned it inside out. Every week the *MUSICAL MAILBAG* team gets together to have fun and read your letters. This program can be heard following each release of *STUDIO 9*. An exception is on HCJB's broadcasts to Europe, when it can be heard at 0700 and again at 2130 UTC.

DXer OF THE MONTH



Massimiliano in a happy mood as he shops in an electronic's store

The choice of a special DXer for this edition of ANDEX International takes us to Italy where we want you to meet Massimiliano Santini. He is an 18-year-old student at the State Industrial and Technical Institute, located in Spoleto, Italy, where Massimiliano lives. His studies include not only technical subjects but also Italian, English, history, math, law, economics, religion, and gymnastics. It would appear that he is receiving a well-rounded education which will prepare him well for whatever profession he decides to follow later in life.

Spoleto is located in central Italy, about 130 kilometers from Rome. It is a beautiful city in a mountainous region—a fantastic place full of history and scenic spots for sightseeing and vacationing. The population of Spoleto is about 40,000 people. Massimiliano urges other ANDEX members to come to Spoleto and enjoy the sights and pleasures.

Our DXer of the Month got his start in the hobby in 1987, when his parents gave him his first shortwave radio. The receiver he now uses for DXing is a Phonola TR-8845 and he uses just the telescopic antenna on the set. The first station he verified was Radio Prague. At that time his knowledge of the English language was limited, and he found it difficult to understand stations broadcasting in that language. It was also quite difficult to write to them in English. He credits his DXing hobby for helping him to improve his ability to speak English, and he has shown real progress during the past three years. He gives special credit to HCJB and ANDEX because the publications he has received from Ecuador have been very helpful in many ways.

Massimiliano has now verified more than 30 stations from all continents. There are several stations he especially appreciates because he has had very good response from their programmers. These include HCJB in South America, Voice of America and Family Radio in North America, Radio South Africa in Africa, Radio Moscow and Radio Peace and Progress in Europe, and Voice of Free China and Voice of Vietnam in Asia.

Our DXer of the Month feels that the most important thing for any station that broadcasts its programs overseas is to have a good relationship and follow-up with its listeners. That is what he likes most about his favorite stations. DXing has given him not only the opportunity of learning about other cultures but has also shown him how important it is for people of different races and colors to know and understand each other.

We are happy to have Massimiliano as a member of ANDEX—member #6505.

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With a conventional SSB receiver, such as is currently used by most amateur radio operators, speech will be undistorted, but the frequency response will be limited. Music will be distorted unless the receiver is tuned precisely. Most of the better quality receivers currently used by DXers fall into this same category and will give similar results since they are designed to receive SSB and CW signals. However, results will probably vary greatly from one make or model to another. The low-priced shortwave receivers, millions of which are used daily around the world, will give very poor results. The best reception will be obtained by using a receiver having synchronous detection (phase locked loop capability), but this is a recent development and few are in use. Probably the most popular receiver with this facility is the Sony ICF-2010. In some countries this model is known as the ICF-2001D. This Sony receiver will provide high quality reception of both speech and music. The audio bandwidth is 6 kHz, so with proper receiving equipment audio quality will rival or exceed the better AM shortwave transmitters, especially when there is noticeable fading on the received signal.

Here is where you as a DXer can help. Your reception reports on these SSB transmitters will be of great assistance in evaluating the future of SSB broadcasting on the international shortwave broadcasting bands. They will also be of assistance to our HCJB engineers as they continue experimenting with this new technology. We believe it is time that this new technology were more widely used. When sending in your reception reports, be sure to give details on the receiver you are using and the audio quality obtained with various types of tuning.

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the CPRV page

COMMITTEE TO PRESERVE RADIO VERIFICATIONS

JERRY BERG, Chairperson • 38 Eastern Ave. • Lexington, MA 02173 • (617) 861-8481

YV5RB Y YV5RD
 1200 Kc. 6150 Kc.
RADIODIFUSORA VENEZUELA
 CARACAS-VENEZUELA
 Caracas: 16 de ABRIL de 1938
 Acusamos recibo de su amable reportaje del 28 de Febrero 1938
 hecha la verificación, certificamos que Ud. oyó nuestro programa a las 8 de Febrero de 1938 en 6.158 Kc. 4872 M.
 Le damos nuestras expresivas gracias por su fina atención.
 por Radiodifusora Venezuela.

X. E. K. W.
 6.030 KC.
 BANDA DE 49 MTS.
X. E. S. F.
 1.300 KC.
 ONDA LARGA
RADIO MORELIA
 MORELIA, MICH., MEXICO.
 QSL de confirmación al reporte enviado por
 Paul Kery de Johnstown, Pa., U.S.A.
 Muchas Gracias.
 Con nuestros mejores deseos.

This card certifies that Mr. August Balbi
 heard our short wave station on December 11th 1938
 Este cartão certifica que
 ouviu nossa estação de ondas curtas em
 10220 Kc - 29.35 M.
PSH

 Rio de Janeiro

COLOMBIA
"LA VOZ DE BARRANQUILLA"
 Thank you for your report. A repetition of this report will be made on the program of the station.
 Gracias por su reporte. Una repetición de este reporte será hecha en el programa de la estación.
HJ-1-ABB
 On the air - Horario
 11.45 a. m. 1 p. m.
 5.30-10 p. m. E. S. T.
 Onda larga-Long wave
HJ-1-ABA
 1230 Kc. - 150 Watts
ELIAS J. PELLET
 Box 715
BARRANQUILLA

Here are some more historic Latin American QSL cards from the late 1930s. Venezuelan YV5RD reportedly played four gongs before announcements, which were multi-lingual. There weren't many Brazilian stations on shortwave back in the old days, but one that was widely heard was PSH in Marapicu. It was known as *Radio Internacional do Brazil* and broadcast from 1800-1900 EST. It gave its call letters phonetically as "Peter, Samuel, Harris." The Colombian, *La Voz de Barranquilla*, operated in the mornings and evenings on various channels. This QSL says 6450, but it was also reported on 4770, 4807, 6115, 9555 kHz and other nearby frequencies. There were many Mexican stations on shortwave in the 30s and 40s. *Radio Morelia*, XESF, was one of these. The medium-wave channel, XEKW, is still on the air.

The card from PSH brings back many memories of the early days of "DX Party Line" on HCJB. This card was donated by August Balbi, one of the outstanding pioneer DXers of the 30s and 40s. For a number of years he was a regular contributor to the "DX Party Line," and his reception reports and DX tips were eagerly looked forward to by our listeners. He lived in California and was closely associated with the American Shortwave Listeners Club, ASWLC, which, for many years, cooperated with the "DX Party Line" as a major source of DX information. It is good to know that Mr. Balbi's outstanding collection of QSL cards has been preserved by CPRV. This committee now has over 22,000 valuable QSL cards in its collection—cards that might have been destroyed or lost without the efforts of Jerry Berg and others.

Are you interested in an easy way to donate your QSLs to CPRV when the time comes? Just send a business size SASE to CPRV Registered Collections Coordinator, John C. Herkimer, P.O. Box 54, Caledonia, NY 14423, for full details. Why not drop John a letter today!

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We wish to cooperate with manufacturers as they develop better and cheaper receivers which will take advantage of the benefits of SSB broadcasting. DXers and DX clubs can give valuable help as they determine which present receivers do the best job in receiving SSB signals. This new method of transmitting can only reach its full potential when good phase locked loop receivers are produced at a reasonable and competitive price. With the present rapid increase in technology, such a breakthrough could come sooner than we expect! Even then, it will take years to replace the millions of cheap transistor shortwave receivers now in use in every part of the world.

HCJB is currently building several shortwave transmitters at its engineering facility in Elkhart, Ind., in the United States. These new transmitters, and others built recently, are all SSB compatible. Obviously they will be used as standard AM transmitters until such time as SSB broadcasting becomes common place. In the meantime, the two HCJB SSB transmitters will be used to augment the regular program service from Quito. Scheduling and frequencies may change as time goes on. Other antennas may be installed to reach different target areas. Keep listening to "DX Party Line" and watch your ANDEX bulletins for any changes as our engineers continue to investigate the future potential for SSB as an international broadcasting mode.

We look forward to many HCJB SSB reception reports as you, our ANDEX members, send them in. We want to hear from each of you. Your reports will be very valuable.



Think of it—in three days
you'll no longer be a single sidebander.

FEES FOR ANDEX MEMBERSHIP MAY BE PAID IN THE CURRENCY OF THE COUNTRIES BELOW BY SENDING TO THE ADDRESS GIVEN:

AUSTRALIA	A \$6.50	HCJB—ANDEX, GPO Box 691, Melbourne, Vic 3001, Australia
CANADA	C \$6.50	HCJB—ANDEX, 2110 Argenta Rd., Mississauga, Ontario, Canada L5N 2K7
FINLAND	FIM 25 to the bank	Send fee to: Radio HCJB, Helsingin Sp/Helsingfors Sb, 405506-09630716. Send application form to: Radio HCJB, PL-101, 15111 Lahti, Finland
ITALY	L 7.000	HCJB—ANDEX, Via Cavallotti, 16, 41043 Formigine (Modena), Italy
JAMAICA	J \$25	HCJB—ANDEX, Jamaica Office, P.O. Box 31, Kingston 6, Jamaica
NEW ZEALAND	NZ \$10	HCJB—ANDEX, P.O. Box 82-296, Highland Park, Auckland, New Zealand
SWEDEN	Equivalent of \$5.00 USA dollars	Fees to: Postgiro 68 06 80-6 OR to bank giro 332-4407. Send application form to: Radio HCJB, Box 110, 54201 Mariestad. Check the current exchange at your bank to determine the fee.
SWITZERLAND	Sfr. 10	Send Fees through the postal system to: Radio HCJB-Schweizer Arbeitszweig, Mannedorf, P.C. Glarus 87-3468. Send application form to: Radio HCJB- Schweizer Arbeitszweig, Postf. 119, 8708 Mannedorf
UNITED KINGDOM	3 pounds 75 pence	HCJB—ANDEX, 131 Grattan Rd., Bradford, West Yorkshire, England, BD 1 2HS OR send to Post Office giro account 625 2311 by using a transfer form from a members Girobank account or using the "Transcash" service available at all post offices in the U.K.
U.S.A.	US \$5.00	HCJB—ANDEX, P.O. Box 553000, Opa Locka (Miami), Florida 33055-0401
WEST GERMANY	DM 12	Margot Stegmiller, Hebelstr. 32, D-6908 Wiesloch, Federal Republic of Germany Account Nr. 2074 15-675 Postgiro Ludwigshafen

EUROPEAN COUNTRIES WHERE THERE IS NOT A LOCAL OFFICE:

Applicants may use the United Kingdom
post office giro account by sending the
equivalent of three pounds and 75 pence.

IF YOU LIVE ANYWHERE ELSE, REMIT \$5.00 (U.S.A. dollars) to: HCJB-ANDEX, P.O.
Box 553000, Opa Locka (Miami), Florida 33055-0401.

APPLICANTS WHO HAVE DIFFICULTY PAYING THE MEMBERSHIP FEE MAY
APPLY FOR OUR SPONSORSHIP PROGRAM.
THE AMOUNTS LISTED ARE THE FEES FOR A FULL YEAR OF AIRMAIL SERVICE. MAKE
CHECKS/MONEY ORDERS PAYABLE TO HCJB-ANDEX. INTERNATIONAL REPLY
COUPONS MAY BE USED TO PAY THE FEE. WE REQUIRE TEN (10) IRCs PER
MEMBERSHIP. UNUSED POSTAGE STAMPS ARE NOT ACCEPTED AS PAYMENT.



ANDEX International



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Interim ANDEX Director Clayton Howard

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