The SERVIR Network

USAID

1
00:00:10,200 --> 00:00:05,840
I

2
00:00:12,900 --> 00:00:10,210
Leland Melvin associate administrator

3
00:00:16,380 --> 00:00:12,910
for education and on behalf of NASA

4
00:00:19,230 --> 00:00:16,390
Administrator Charlie Bolden and USAID

5
00:00:21,660 --> 00:00:19,240
administrator Rajiv Shah I welcome you

6
00:00:23,820 --> 00:00:21,670
to today's event I like to give a

7
00:00:25,830 --> 00:00:23,830
special thank you and welcome to David

8
00:00:27,390 --> 00:00:25,840
Barras he's my counterpart at USAID

9
00:00:31,970 --> 00:00:27,400
we're working some education programs

10
00:00:37,500 --> 00:00:35,369
and first I like to talk about

11
00:00:39,750 --> 00:00:37,510
relationships this is a wonderful

12
00:00:41,970 --> 00:00:39,760
relationship that we're joining forces

13
00:00:43,770 --> 00:00:41,980

to help change the world if you take a

14
00:00:45,599 --> 00:00:43,780
look at the slide of there as an

15
00:00:48,270 --> 00:00:45,609
astronaut both Charlie and I flew in

16
00:00:50,579 --> 00:00:48,280
space multiple times and if you look at

17
00:00:52,649 --> 00:00:50,589
this slide here you see people from all

18
00:00:54,869 --> 00:00:52,659
around the world we had african-american

19
00:00:57,509 --> 00:00:54,879
Asian American French German Russian and

20
00:00:59,459 --> 00:00:57,519
the first female commander now when I

21
00:01:01,139 --> 00:00:59,469
got to space dr. Whitson who you see

22
00:01:03,419 --> 00:01:01,149
there in the green shirt in the middle

23
00:01:04,950 --> 00:01:03,429
she invited us over to dinner to break

24
00:01:08,010 --> 00:01:04,960
bread in the service module in a Russian

25
00:01:10,050 --> 00:01:08,020
segment and we said you guys bring the

26
00:01:11,430 --> 00:01:10,060
vegetables will have the meat and so we

27
00:01:13,340 --> 00:01:11,440
floated over with our rehydrated

28
00:01:17,280 --> 00:01:13,350
vegetables and we were sitting there

29
00:01:19,740 --> 00:01:17,290
having this meal at this outpost 240

30
00:01:23,250 --> 00:01:19,750
miles up in space driving around the

31
00:01:25,500 --> 00:01:23,260
planet every 90 minutes at 17,500 miles

32
00:01:27,660 --> 00:01:25,510
per hour looking at the planet below

33
00:01:31,280 --> 00:01:27,670
listening to shaday while we were eating

34
00:01:33,990 --> 00:01:31,290
our meals but I tell you this because

35
00:01:35,880 --> 00:01:34,000
these were people in space it were at

36
00:01:38,040 --> 00:01:35,890
one time fighting against each other and

37
00:01:40,980 --> 00:01:38,050
we were working together for a common

38
00:01:43,590 --> 00:01:40,990

goal to extend humankind and

39
00:01:44,730 --> 00:01:43,600
civilization so as I look at the

40
00:01:47,760 --> 00:01:44,740
students because the students please

41
00:01:53,490 --> 00:01:47,770
stand up in here for a second if i look

42
00:01:58,660 --> 00:01:56,770
all of you are the future you are the

43
00:02:01,450 --> 00:01:58,670
future of our civilization you're the

44
00:02:02,800 --> 00:02:01,460
future of helping come together working

45
00:02:04,510 --> 00:02:02,810
with people that don't sound like you

46
00:02:06,550 --> 00:02:04,520
they don't talk like you they maybe

47
00:02:07,870 --> 00:02:06,560
don't eat the same food that you eat but

48
00:02:09,100 --> 00:02:07,880
you got to come together well I got to

49
00:02:11,020 --> 00:02:09,110
come together to make a difference in

50
00:02:17,500 --> 00:02:11,030
this world so thank you for coming you

51
00:02:19,509 --> 00:02:17,510
can all sit down now so as I said

52
00:02:21,250 --> 00:02:19,519
breaking bread together in space sharing

53
00:02:23,170 --> 00:02:21,260
together relationships it's all about

54
00:02:25,710 --> 00:02:23,180
coming together as one if you go to the

55
00:02:27,759 --> 00:02:25,720
next slide this is Tracy Caldwell Dyson

56
00:02:30,250 --> 00:02:27,769
looking out of the cert out of the

57
00:02:33,640 --> 00:02:30,260
acapella it's of our space window

58
00:02:35,320 --> 00:02:33,650
looking down on the planet and as we go

59
00:02:37,720 --> 00:02:35,330
around the planet every 90 minutes you

60
00:02:40,660 --> 00:02:37,730
see so many different things but one

61
00:02:42,580 --> 00:02:40,670
thing that you don't see is Geographic

62
00:02:45,580 --> 00:02:42,590
borders borders that separate people

63
00:02:47,650 --> 00:02:45,590

it's just one planet and this

64
00:02:49,900 --> 00:02:47,660
relationship is going to help us as a

65
00:02:52,240 --> 00:02:49,910
civilization come together to ensure

66
00:02:55,380 --> 00:02:52,250
that we get along we work together and

67
00:02:57,970 --> 00:02:55,390
we make differences in the world and so

68
00:03:00,190 --> 00:02:57,980
breaking down barriers of race sex and

69
00:03:01,569 --> 00:03:00,200
even close mindedness you must get a lot

70
00:03:05,349 --> 00:03:01,579
of people who may not look like you

71
00:03:07,210 --> 00:03:05,359
sound like you're even like you the

72
00:03:09,819 --> 00:03:07,220
signing of this mou between NASA and

73
00:03:12,309 --> 00:03:09,829
USAID is a fine example of relationship

74
00:03:15,009 --> 00:03:12,319
building of coming together to make a

75
00:03:17,860 --> 00:03:15,019
difference not just for one agency or

76
00:03:20,550 --> 00:03:17,870
even one country but for people of this

77
00:03:23,050 --> 00:03:20,560
world at this time I'd like to introduce

78
00:03:29,020 --> 00:03:23,060
administrator Shah did you please come

79
00:03:31,059 --> 00:03:29,030
to the stage dr. Rajiv Shah was sworn in

80
00:03:32,020 --> 00:03:31,069
as the 16th administrator of the United

81
00:03:35,890 --> 00:03:32,030
States Agency for International

82
00:03:42,699 --> 00:03:35,900
Development USAID on December 31st 2009

83
00:03:47,990 --> 00:03:45,920
thank you it is wonderful to be here

84
00:03:50,390 --> 00:03:48,000
with you and thank you so much Leland

85
00:03:51,890 --> 00:03:50,400
for those inspiring opening words in

86
00:03:54,229 --> 00:03:51,900
your kind introduction I want to thank

87
00:03:56,869 --> 00:03:54,239
NASA for hosting this event and

88
00:03:59,509 --> 00:03:56,879

continuing to inspire our country and

89
00:04:02,300 --> 00:03:59,519
our kids I want to thank administrator

90
00:04:04,699 --> 00:04:02,310
Bolden for seizing the opportunity to

91
00:04:07,100 --> 00:04:04,709
partner with us with a huge amount of

92
00:04:08,750 --> 00:04:07,110
passion and commitment and I want to

93
00:04:11,360 --> 00:04:08,760
thank in particular all of the students

94
00:04:12,979 --> 00:04:11,370
that have come today because really it

95
00:04:14,240 --> 00:04:12,989
this is this is really about the

96
00:04:18,650 --> 00:04:14,250
opportunities we have for the future

97
00:04:21,110 --> 00:04:18,660
together and fifty years ago President

98
00:04:24,290 --> 00:04:21,120
Kennedy asked Congress to achieve two

99
00:04:26,000 --> 00:04:24,300
incredibly ambitious goals one everyone

100
00:04:28,940 --> 00:04:26,010
in this building is very familiar with

101
00:04:32,390 --> 00:04:28,950
the the challenge to get to the moon and

102
00:04:34,430 --> 00:04:32,400
the challenge to be leaders in our space

103
00:04:36,290 --> 00:04:34,440
exploration and to use that as a way to

104
00:04:38,330 --> 00:04:36,300
both demonstrate our technological

105
00:04:40,340 --> 00:04:38,340
prowess and bring our world closer

106
00:04:43,520 --> 00:04:40,350
together and we saw the successful

107
00:04:45,650 --> 00:04:43,530
fruits of those labors the other goal

108
00:04:48,740 --> 00:04:45,660
was perhaps less well understood at that

109
00:04:51,409 --> 00:04:48,750
time but in 1961 President Kennedy sent

110
00:04:53,150 --> 00:04:51,419
a letter to Congress asking Congress to

111
00:04:56,390 --> 00:04:53,160
create the US Agency for International

112
00:04:59,300 --> 00:04:56,400
Development to help transmit our values

113
00:05:01,760 --> 00:04:59,310

around the world to look after those who

114
00:05:04,219 --> 00:05:01,770
were the most vulnerable to make sure

115
00:05:07,520 --> 00:05:04,229
children didn't suffer and die from

116
00:05:10,670 --> 00:05:07,530
famine and hunger and disease and a lack

117
00:05:13,190 --> 00:05:10,680
of access to water and basic health and

118
00:05:16,190 --> 00:05:13,200
for 50 years we've been carrying that

119
00:05:18,680 --> 00:05:16,200
mantle so to have the opportunity today

120
00:05:22,190 --> 00:05:18,690
to announce a partnership under

121
00:05:25,219 --> 00:05:22,200
President Obama's leadership to bring

122
00:05:27,320 --> 00:05:25,229
together NASA representing all of what

123
00:05:29,960 --> 00:05:27,330
we can do when we put our minds together

124
00:05:31,760 --> 00:05:29,970
and try to solve tough problems and US

125
00:05:34,400 --> 00:05:31,770
aid representing our challenge of

126
00:05:37,040 --> 00:05:34,410
getting our values and our core

127
00:05:38,719 --> 00:05:37,050
compassion and commitments transmitted

128
00:05:41,750 --> 00:05:38,729
to the farthest corners of the globe's

129
00:05:44,080 --> 00:05:41,760
to protect the most vulnerable people is

130
00:05:47,510 --> 00:05:44,090
just a very special and unique

131
00:05:48,920 --> 00:05:47,520
opportunity for me to join so I want to

132
00:05:52,909 --> 00:05:48,930
thank everybody for pulling this

133
00:05:54,650 --> 00:05:52,919
together today you know our logo at US

134
00:05:56,090 --> 00:05:54,660
aid is the picture

135
00:05:58,040 --> 00:05:56,100
they're over there with the handshake

136
00:05:59,570 --> 00:05:58,050
and it represents the partnerships we

137
00:06:02,990 --> 00:05:59,580
engage in with countries around the

138
00:06:04,640 --> 00:06:03,000

world on commodities that we send food

139
00:06:07,190 --> 00:06:04,650
that we send right under the logo it

140
00:06:08,720 --> 00:06:07,200
says from the American people but the

141
00:06:10,670 --> 00:06:08,730
reality is the things we do in

142
00:06:12,770 --> 00:06:10,680
development and the things we do around

143
00:06:16,100 --> 00:06:12,780
the world are also for the American

144
00:06:18,740 --> 00:06:16,110
people we see whether in Afghanistan or

145
00:06:21,290 --> 00:06:18,750
other parts of the world that our core

146
00:06:23,090 --> 00:06:21,300
activities are a critical part of

147
00:06:26,210 --> 00:06:23,100
keeping us safe and maintaining our

148
00:06:28,070 --> 00:06:26,220
security we have seen in successful

149
00:06:30,740 --> 00:06:28,080
engagements over decades in places like

150
00:06:32,690 --> 00:06:30,750
South Korea that we help create real

151
00:06:35,030 --> 00:06:32,700
economic opportunity for American

152
00:06:37,940 --> 00:06:35,040
businesses and American communities and

153
00:06:40,550 --> 00:06:37,950
I see every time I visit college

154
00:06:42,770 --> 00:06:40,560
campuses around this country how we are

155
00:06:44,920 --> 00:06:42,780
part of expressing our moral values

156
00:06:47,600 --> 00:06:44,930
around the world and how that inspires

157
00:06:50,840 --> 00:06:47,610
students and future generations of

158
00:06:53,540 --> 00:06:50,850
students to do ever more to invent the

159
00:06:56,180 --> 00:06:53,550
kind of solutions that can really bring

160
00:06:57,800 --> 00:06:56,190
about tremendous change there are two

161
00:06:59,960 --> 00:06:57,810
specific programs I think we're going to

162
00:07:02,330 --> 00:06:59,970
learn about today the launch program and

163
00:07:04,310 --> 00:07:02,340

the severe program I'm thrilled that

164
00:07:06,230 --> 00:07:04,320
Carrie Stokes one of our leaders from

165
00:07:08,930 --> 00:07:06,240
our economic growth and climate group

166
00:07:11,110 --> 00:07:08,940
will be here to talk to us about the

167
00:07:13,850 --> 00:07:11,120
severe program the fact that we can use

168
00:07:16,580 --> 00:07:13,860
satellite imagery and other geospatial

169
00:07:18,590 --> 00:07:16,590
data to identify where disasters might

170
00:07:21,500 --> 00:07:18,600
strike and to identify where when those

171
00:07:22,880 --> 00:07:21,510
disasters might strike tens of thousands

172
00:07:25,070 --> 00:07:22,890
hundreds of thousands of people might

173
00:07:27,770 --> 00:07:25,080
lose their lives and then do things to

174
00:07:29,150 --> 00:07:27,780
prevent it ahead of time I'm also

175
00:07:31,670 --> 00:07:29,160
thrilled we're going to learn about the

176
00:07:33,530 --> 00:07:31,680
launch program and we'll learn from our

177
00:07:35,659 --> 00:07:33,540
colleagues that are creating new

178
00:07:37,970 --> 00:07:35,669
applications of mobile technology and

179
00:07:39,710 --> 00:07:37,980
mobile phones to really bring human

180
00:07:44,810 --> 00:07:39,720
opportunity to people who have lived

181
00:07:46,780 --> 00:07:44,820
off-grid for far far too long it's been

182
00:07:50,000 --> 00:07:46,790
a real priority of mine to reintroduce

183
00:07:52,159 --> 00:07:50,010
science technology and innovation into

184
00:07:55,070 --> 00:07:52,169
what USA it stands for and represents

185
00:07:56,810 --> 00:07:55,080
you know just last week or just a few

186
00:08:00,230 --> 00:07:56,820
weeks ago I had the chance to visit a

187
00:08:01,430 --> 00:08:00,240
group of students at MIT and they took

188
00:08:03,890 --> 00:08:01,440

me into one of their basement

189
00:08:06,320 --> 00:08:03,900
laboratories where PhD students and

190
00:08:08,330 --> 00:08:06,330
undergrads were coming together most had

191
00:08:11,060 --> 00:08:08,340
visited developing countries

192
00:08:12,890 --> 00:08:11,070
worked in rural villages seen how young

193
00:08:14,480 --> 00:08:12,900
girls often don't get to go to school

194
00:08:16,909 --> 00:08:14,490
because they're out getting water and

195
00:08:18,469 --> 00:08:16,919
then purifying it back home so their

196
00:08:20,960 --> 00:08:18,479
families have something to drink or

197
00:08:23,000 --> 00:08:20,970
they've seen how mothers forego meals

198
00:08:25,219 --> 00:08:23,010
even when they're pregnant so their

199
00:08:27,200 --> 00:08:25,229
other kids can eat and they've been seen

200
00:08:29,930 --> 00:08:27,210
the disastrous consequences of that

201
00:08:32,180 --> 00:08:29,940
acute malnutrition on young children and

202
00:08:34,130 --> 00:08:32,190
pregnant women and they were literally

203
00:08:36,469 --> 00:08:34,140
inventing the solutions to those

204
00:08:40,040 --> 00:08:36,479
problems they were inventing new water

205
00:08:42,680 --> 00:08:40,050
purifiers that could help save thousands

206
00:08:44,360 --> 00:08:42,690
millions of labor hours of girls so the

207
00:08:47,329 --> 00:08:44,370
girls could go to school they were

208
00:08:49,970 --> 00:08:47,339
inventing improved products for

209
00:08:52,190 --> 00:08:49,980
nutrition food products so that the very

210
00:08:53,960 --> 00:08:52,200
poor most vulnerable amongst us has a

211
00:08:56,510 --> 00:08:53,970
chance to lead a healthy productive life

212
00:08:59,030 --> 00:08:56,520
and I was so proud of those students and

213
00:09:00,560 --> 00:08:59,040

in the same way I'm so proud of what

214
00:09:02,630 --> 00:09:00,570
we're all doing here together today

215
00:09:07,040 --> 00:09:02,640
because we're bringing the inventiveness

216
00:09:09,140 --> 00:09:07,050
the technology what NASA represents to

217
00:09:11,260 --> 00:09:09,150
the challenge of development and we're

218
00:09:14,240 --> 00:09:11,270
doing it in a real spirit of partnership

219
00:09:17,449 --> 00:09:14,250
so I want to thank the entire NASA team

220
00:09:20,120 --> 00:09:17,459
for really inspiring me and for showing

221
00:09:22,550 --> 00:09:20,130
all of us that when we're committed and

222
00:09:26,000 --> 00:09:22,560
inventive we can change the world for

223
00:09:27,670 --> 00:09:26,010
the better in a fundamental way I now

224
00:09:30,769 --> 00:09:27,680
have the unique pleasure of opera

225
00:09:32,030 --> 00:09:30,779
introducing administrator Bolden and I

226
00:09:34,519 --> 00:09:32,040
don't think he needs much of an

227
00:09:36,710 --> 00:09:34,529
introduction in this building but let me

228
00:09:39,800 --> 00:09:36,720
tell you he's a distinguished former

229
00:09:42,590 --> 00:09:39,810
Marine he's in the u.s. astronaut Hall

230
00:09:45,019 --> 00:09:42,600
of Fame he's been a CEO and a

231
00:09:47,180 --> 00:09:45,029
motivational speaker and he's probably

232
00:09:49,930 --> 00:09:47,190
the coolest administrator in the federal

233
00:09:52,519 --> 00:09:49,940
government as a result of all of that

234
00:09:54,560 --> 00:09:52,529
but what I'm so committed what I'm so

235
00:09:56,960 --> 00:09:54,570
excited about is when when he first came

236
00:09:59,120 --> 00:09:56,970
to see me when we first met he told me

237
00:10:02,329 --> 00:09:59,130
he said look Raj I want us to do stuff

238
00:10:03,800 --> 00:10:02,339

together that actually generates results

239
00:10:05,900 --> 00:10:03,810
for the poorest and most vulnerable

240
00:10:08,060 --> 00:10:05,910
people around the world and I have a

241
00:10:10,670 --> 00:10:08,070
sense that whether it's inventing new

242
00:10:13,850 --> 00:10:10,680
water purification technologies and

243
00:10:16,610 --> 00:10:13,860
using space-based experiments to do it

244
00:10:18,730 --> 00:10:16,620
or whether it's just figuring out how to

245
00:10:21,000 --> 00:10:18,740
get this incredible community of

246
00:10:22,650 --> 00:10:21,010
inspirational leaders who have been

247
00:10:25,200 --> 00:10:22,660
were astronauts or current astronauts

248
00:10:27,450 --> 00:10:25,210
thinking about and talking about this

249
00:10:29,820 --> 00:10:27,460
next greatest challenge of our time the

250
00:10:32,610 --> 00:10:29,830
quest to end hunger and poverty the

251
00:10:34,170 --> 00:10:32,620
quest to extend human opportunity to the

252
00:10:35,790 --> 00:10:34,180
farthest corners of the globe I'm

253
00:10:37,530 --> 00:10:35,800
committed to it and I want to partner

254
00:10:39,870 --> 00:10:37,540
with you and so for that sir thank you

255
00:10:47,990 --> 00:10:39,880
very much and I'm excited to have to be

256
00:10:53,610 --> 00:10:52,380
great rush thanks so very much and

257
00:10:55,740 --> 00:10:53,620
thanks to all of you for coming out this

258
00:10:57,030 --> 00:10:55,750
afternoon I know there hopefully there

259
00:10:58,620 --> 00:10:57,040
are thousands of people around the

260
00:11:01,140 --> 00:10:58,630
country who are watching this over

261
00:11:03,000 --> 00:11:01,150
television or whatever but I'm delighted

262
00:11:05,850 --> 00:11:03,010
to be here today to take part in

263
00:11:08,010 --> 00:11:05,860

formalizing the exceptional relationship

264
00:11:09,990 --> 00:11:08,020
that nASA has with the US Agency for

265
00:11:13,640 --> 00:11:10,000
International Development through the

266
00:11:16,200 --> 00:11:13,650
signing of this MOU this afternoon I

267
00:11:20,700 --> 00:11:16,210
really want to extend a special welcome

268
00:11:22,530 --> 00:11:20,710
to you dr. Shaw four ND your staff for

269
00:11:26,850 --> 00:11:22,540
all that you have done you know you have

270
00:11:29,100 --> 00:11:26,860
you funded severe for a long time you

271
00:11:31,080 --> 00:11:29,110
are the dominant funder and we just go

272
00:11:32,640 --> 00:11:31,090
to work with you and that's been a lot

273
00:11:34,950 --> 00:11:32,650
of fun as I look at Carrie smiling out

274
00:11:37,170 --> 00:11:34,960
there and an arrow and we've met each

275
00:11:38,040 --> 00:11:37,180
other at different places around the

276
00:11:40,470 --> 00:11:38,050
world and it's been absolutely

277
00:11:41,790 --> 00:11:40,480
incredible when you and Dan and Carrie

278
00:11:44,640 --> 00:11:41,800
going to talk a little bit about severe

279
00:11:46,020 --> 00:11:44,650
later on so or shortly okay I'm not

280
00:11:49,290 --> 00:11:46,030
going to be here very long I see some of

281
00:11:51,840 --> 00:11:49,300
you going whoo how long is he going to

282
00:11:55,160 --> 00:11:51,850
talk I'm not going to talk very long but

283
00:11:58,260 --> 00:11:55,170
but hopefully dan and sherry will will

284
00:12:00,150 --> 00:11:58,270
hopefully they will help you to carry

285
00:12:02,040 --> 00:12:00,160
will help you to understand the

286
00:12:04,380 --> 00:12:02,050
significance of programs like launch and

287
00:12:06,780 --> 00:12:04,390
like severe for what they do for people

288
00:12:08,520 --> 00:12:06,790

around the world who otherwise would not

289
00:12:10,920 --> 00:12:08,530
be able to do things for themselves when

290
00:12:14,790 --> 00:12:10,930
we were in Nairobi Kenya they had just

291
00:12:17,580 --> 00:12:14,800
started working on drought and flood

292
00:12:20,370 --> 00:12:17,590
models for 15 nations in East Africa and

293
00:12:25,530 --> 00:12:20,380
we had an opportunity to open the third

294
00:12:27,240 --> 00:12:25,540
severe center in Katmandu Nepal I mean

295
00:12:29,340 --> 00:12:27,250
you know enough i guess in the was that

296
00:12:32,280 --> 00:12:29,350
the foothills would you call it the

297
00:12:34,020 --> 00:12:32,290
foothills of the Himalayas about you

298
00:12:34,670 --> 00:12:34,030
know but but it was absolutely

299
00:12:38,340 --> 00:12:34,680
incredible

300
00:12:40,290 --> 00:12:38,350
to see these people really excited about

301
00:12:42,689 --> 00:12:40,300
having an opportunity to work with USAID

302
00:12:44,009 --> 00:12:42,699
and NASA on something that was really

303
00:12:47,970 --> 00:12:44,019
going to make a difference for people in

304
00:12:50,129 --> 00:12:47,980
that part of the world I joined dr. Shaw

305
00:12:52,470 --> 00:12:50,139
so in welcoming the students here yeah

306
00:12:54,179 --> 00:12:52,480
I'm particularly pleased to see the

307
00:12:56,160 --> 00:12:54,189
number of you who have been able to come

308
00:12:57,420 --> 00:12:56,170
out today and I know it's a very busy

309
00:12:59,490 --> 00:12:57,430
time of the school year for you you're

310
00:13:02,369 --> 00:12:59,500
trying to get through the to the end of

311
00:13:04,740 --> 00:13:02,379
the year and hoping it'll end soon I can

312
00:13:07,650 --> 00:13:04,750
see some of you smiling as i say that

313
00:13:10,110 --> 00:13:07,660

some of you hope it never ends but your

314
00:13:13,650 --> 00:13:10,120
moms and dads or you know kind of hoping

315
00:13:15,210 --> 00:13:13,660
the other way i hope that more students

316
00:13:17,939 --> 00:13:15,220
around the around the country right now

317
00:13:20,189 --> 00:13:17,949
are watching this telecast today over

318
00:13:22,319 --> 00:13:20,199
the last several years working in close

319
00:13:24,420 --> 00:13:22,329
partnership with USAID we've

320
00:13:26,879 --> 00:13:24,430
demonstrated the useful application of

321
00:13:29,100 --> 00:13:26,889
space technology to address a variety of

322
00:13:31,379 --> 00:13:29,110
environmental challenges throughout the

323
00:13:32,970 --> 00:13:31,389
developing world using pilot projects

324
00:13:34,769 --> 00:13:32,980
and programs such as severe program

325
00:13:36,540 --> 00:13:34,779
about which you will be hearing more

326
00:13:39,059 --> 00:13:36,550
shortly from danwon and Carrie Stokes

327
00:13:41,040 --> 00:13:39,069
our partnership in severe has been a

328
00:13:43,679 --> 00:13:41,050
model for the successful use of

329
00:13:45,540 --> 00:13:43,689
environmental data from space and on the

330
00:13:47,939 --> 00:13:45,550
ground to help decision-makers better

331
00:13:50,189 --> 00:13:47,949
address the challenges of sustainable

332
00:13:52,470 --> 00:13:50,199
international development the first

333
00:13:53,850 --> 00:13:52,480
severe operational facility was

334
00:13:55,860 --> 00:13:53,860
developed in cooperation with countries

335
00:13:58,800 --> 00:13:55,870
in Central America and is based in

336
00:14:00,769 --> 00:13:58,810
Panama severe has since expanded to

337
00:14:03,840 --> 00:14:00,779
include additional regional capabilities

338
00:14:06,269 --> 00:14:03,850

based in Kenya and in Nepal as I just

339
00:14:08,610 --> 00:14:06,279
mentioned a new mo you will serve to

340
00:14:10,829 --> 00:14:08,620
document our mutual commitment to

341
00:14:14,460 --> 00:14:10,839
expanding our efforts in this and other

342
00:14:16,620 --> 00:14:14,470
important programs NASA and USAID are

343
00:14:18,360 --> 00:14:16,630
also working to turn breakthrough

344
00:14:20,910 --> 00:14:18,370
science and technology innovations

345
00:14:22,410 --> 00:14:20,920
discussed at launched initiatives and

346
00:14:25,170 --> 00:14:22,420
launch forums that have been held

347
00:14:26,879 --> 00:14:25,180
earlier this year and last year at the

348
00:14:29,579 --> 00:14:26,889
Kennedy Space Center into real

349
00:14:32,040 --> 00:14:29,589
applications of benefit to both agencies

350
00:14:34,799 --> 00:14:32,050
and most importantly to people around

351
00:14:39,329 --> 00:14:34,809
the world dr. Shaw and I have a strong

352
00:14:41,610 --> 00:14:39,339
belief in our exploration of space have

353
00:14:43,920 --> 00:14:41,620
a strong belief that the revolutionary

354
00:14:46,410 --> 00:14:43,930
new innovations that will help NASA in

355
00:14:47,650 --> 00:14:46,420
our exploration of space may also help

356
00:14:49,690 --> 00:14:47,660
USAID

357
00:14:51,610 --> 00:14:49,700
and their partners to address some of

358
00:14:54,250 --> 00:14:51,620
today's most difficult international

359
00:14:56,310 --> 00:14:54,260
development challenges our partnership

360
00:14:59,140 --> 00:14:56,320
will seek to address important health

361
00:15:00,940 --> 00:14:59,150
nutritional environmental safety and

362
00:15:03,190 --> 00:15:00,950
other challenges in developing countries

363
00:15:06,640 --> 00:15:03,200

in a manner that is mutually beneficial

364
00:15:09,190 --> 00:15:06,650
for the missions of our agencies dr.

365
00:15:11,260 --> 00:15:09,200
Shaw this is a very exciting and

366
00:15:12,730 --> 00:15:11,270
important day for our two agencies and I

367
00:15:14,860 --> 00:15:12,740
welcome the opportunity to work closely

368
00:15:17,770 --> 00:15:14,870
with the US Agency for International

369
00:15:19,330 --> 00:15:17,780
Development under our new agreement to

370
00:15:22,480 --> 00:15:19,340
find solutions to developmental

371
00:15:24,280 --> 00:15:22,490
challenges around the world I hope that

372
00:15:26,380 --> 00:15:24,290
the joint work that we will highlight

373
00:15:29,440 --> 00:15:26,390
this afternoon will serve to inspire

374
00:15:32,260 --> 00:15:29,450
students here today and those watching

375
00:15:34,960 --> 00:15:32,270
our telecast about the values of science

376
00:15:39,130 --> 00:15:34,970
technology engineering and mathematics

377
00:15:41,860 --> 00:15:39,140
in their daily lives we need you every

378
00:15:44,400 --> 00:15:41,870
one of you out there not only in outer

379
00:15:46,960 --> 00:15:44,410
space but also here on the ground

380
00:15:49,840 --> 00:15:46,970
solving problems for the world community

381
00:15:51,490 --> 00:15:49,850
together will continue to make a real

382
00:15:53,830 --> 00:15:51,500
difference in the world and I do hope

383
00:15:56,020 --> 00:15:53,840
that some of you who have not thought

384
00:15:58,180 --> 00:15:56,030
about what you want to do in the years

385
00:16:00,010 --> 00:15:58,190
ahead will give consideration to

386
00:16:02,710 --> 00:16:00,020
becoming members of either the team at

387
00:16:05,080 --> 00:16:02,720
USAID or the team at NASA so thanks

388
00:16:12,359 --> 00:16:05,090

again for coming out and welcome to all

389
00:16:19,090 --> 00:16:14,879
thanks administrator Shah and boldin

390
00:16:22,840 --> 00:16:19,100
okay let me find my place next I'm going

391
00:16:25,449 --> 00:16:22,850
to introduce Dan Merlin he's a NASA

392
00:16:26,619 --> 00:16:25,459
research scientist with over 17 years of

393
00:16:29,439 --> 00:16:26,629
experience in satellite remote sensing

394
00:16:32,109 --> 00:16:29,449
applications and geographic information

395
00:16:34,929 --> 00:16:32,119
systems in the developing world dan is

396
00:16:36,819 --> 00:16:34,939
currently the director of severe the

397
00:16:40,119 --> 00:16:36,829
regional visualization and monitoring

398
00:16:41,979 --> 00:16:40,129
system which is a joint NASA and USAID

399
00:16:45,489 --> 00:16:41,989
program consisting of operational

400
00:16:48,549 --> 00:16:45,499
facilities in Panama Kenya and Nepal as

401
00:16:50,979 --> 00:16:48,559
Charlie mentioned recognized in 2007 is

402
00:16:53,789 --> 00:16:50,989
one of the 100 steps toward the global

403
00:16:56,289 --> 00:16:53,799
Earth observation system of systems

404
00:16:58,599 --> 00:16:56,299
surveyor has provided key decision

405
00:17:02,099 --> 00:16:58,609
support information for monitoring the

406
00:17:05,590 --> 00:17:02,109
land surface oceans and atmosphere in

407
00:17:07,990 --> 00:17:05,600
addition to his work at NASA dan has

408
00:17:10,269 --> 00:17:08,000
promoted small businesses in rural

409
00:17:12,970 --> 00:17:10,279
Central American villages to provide

410
00:17:14,829 --> 00:17:12,980
economic alternatives to tropical

411
00:17:17,829 --> 00:17:14,839
rainforests slash and burn agriculture

412
00:17:20,730 --> 00:17:17,839
and he's also built this is pretty cool

413
00:17:23,049 --> 00:17:20,740

he's also built a Children's Library in

414
00:17:25,829 --> 00:17:23,059
playgrounds in rural villages in

415
00:17:38,379 --> 00:17:25,839
Guatemala please join me in welcoming

416
00:17:40,419 --> 00:17:38,389
band Erwin thank you it's a it's a real

417
00:17:43,539 --> 00:17:40,429
pleasure to be here my career actually

418
00:17:46,149 --> 00:17:43,549
started about 20 years ago a prior to

419
00:17:50,499 --> 00:17:46,159
joining nasa i was working for usaid in

420
00:17:52,659 --> 00:17:50,509
guatemala on a project where i was sent

421
00:17:55,899 --> 00:17:52,669
down there to actually map a new rain

422
00:18:00,039 --> 00:17:55,909
forest reserve and my job consisted of

423
00:18:02,230 --> 00:18:00,049
using a first generation gps and survey

424
00:18:04,539 --> 00:18:02,240
equipment and walking through the

425
00:18:06,399 --> 00:18:04,549
jungles of Guatemala trying to map and

426
00:18:09,249 --> 00:18:06,409
demarcate this reserve and as you can

427
00:18:12,060 --> 00:18:09,259
imagine it was an incredibly physically

428
00:18:14,850 --> 00:18:12,070
challenging job the mosquitoes the heat

429
00:18:18,310 --> 00:18:14,860
walking sometimes 20 miles a day and

430
00:18:20,230 --> 00:18:18,320
then I did that for about a year and by

431
00:18:22,450 --> 00:18:20,240
happenstance a NASA scientist by the

432
00:18:24,280 --> 00:18:22,460
name of Tom Seaver comes down to

433
00:18:26,620 --> 00:18:24,290
Guatemala to do his fieldwork

434
00:18:29,110 --> 00:18:26,630
comes down there and I I meet him and he

435
00:18:30,970 --> 00:18:29,120
rolls out these satellite images of

436
00:18:32,620 --> 00:18:30,980
guatemala and i'm looking at venom and

437
00:18:35,260 --> 00:18:32,630
i'm saying oh my goodness i just spent

438
00:18:36,850 --> 00:18:35,270

the last year walking around and mapping

439
00:18:40,090 --> 00:18:36,860
and I can see everything I've done in

440
00:18:41,800 --> 00:18:40,100
about five minutes and it was an

441
00:18:43,720 --> 00:18:41,810
extraordinary experience and it taught

442
00:18:45,550 --> 00:18:43,730
me of course it didn't totally replace

443
00:18:47,440 --> 00:18:45,560
the importance of being in the field and

444
00:18:49,900 --> 00:18:47,450
in working with communities but it

445
00:18:52,480 --> 00:18:49,910
changed my life and it changed my career

446
00:18:54,490 --> 00:18:52,490
and basically from there on I ended up

447
00:18:56,500 --> 00:18:54,500
joining nasa and dedicating my life and

448
00:18:58,780 --> 00:18:56,510
career to the use of satellite

449
00:19:00,190 --> 00:18:58,790
information and earth observations for

450
00:19:03,010 --> 00:19:00,200
development i actually spent several

451
00:19:05,290 --> 00:19:03,020
years in guatemala there after taking

452
00:19:07,360 --> 00:19:05,300
satellite imagery to the villages and

453
00:19:08,860 --> 00:19:07,370
showing them what was happening in their

454
00:19:10,690 --> 00:19:08,870
communities and seeing what was

455
00:19:12,670 --> 00:19:10,700
happening with the advance of the

456
00:19:14,050 --> 00:19:12,680
agricultural frontier and showing them

457
00:19:18,130 --> 00:19:14,060
that their forest was disappearing

458
00:19:19,690 --> 00:19:18,140
rapidly next please now when most people

459
00:19:20,890 --> 00:19:19,700
think of NASA they think of the space

460
00:19:22,780 --> 00:19:20,900
shuttle or the International Space

461
00:19:25,810 --> 00:19:22,790
Station or exploring the solar system

462
00:19:28,150 --> 00:19:25,820
fewer people know that a goal of NASA

463
00:19:29,710 --> 00:19:28,160

since it was founded is to study the

464
00:19:31,510 --> 00:19:29,720
Earth from space to advanced scientific

465
00:19:34,180 --> 00:19:31,520
understanding and meet societal needs in

466
00:19:35,980 --> 00:19:34,190
over the past 50 years the population on

467
00:19:37,900 --> 00:19:35,990
our planet has doubled and human

468
00:19:40,540 --> 00:19:37,910
activities are now affecting about half

469
00:19:43,270 --> 00:19:40,550
of the lands earth surface and from that

470
00:19:45,250 --> 00:19:43,280
vantage point of space using satellites

471
00:19:46,930 --> 00:19:45,260
using our eyes in the sky we can view

472
00:19:49,090 --> 00:19:46,940
and monitor our planet in different ways

473
00:19:51,100 --> 00:19:49,100
and better understand and look at our

474
00:19:53,740 --> 00:19:51,110
earth these the solid earth the land

475
00:19:57,010 --> 00:19:53,750
surface the atmosphere and the oceans

476
00:19:59,050 --> 00:19:57,020
next please and change is happening in

477
00:20:01,300 --> 00:19:59,060
so many ways and one of the best ways to

478
00:20:04,270 --> 00:20:01,310
see it is from satellite is you look at

479
00:20:07,990 --> 00:20:04,280
this image of Santa Cruz Bolivia in the

480
00:20:11,550 --> 00:20:08,000
Amazon basin from 1975 you see intact

481
00:20:15,460 --> 00:20:11,560
forests and if you next slide please and

482
00:20:16,770 --> 00:20:15,470
look what happens in 2008 the entire and

483
00:20:21,220 --> 00:20:16,780
we're looking at about a hundred

484
00:20:23,950 --> 00:20:21,230
kilometers across completely dominated

485
00:20:27,460 --> 00:20:23,960
by agricultural parcels replacing the

486
00:20:29,920 --> 00:20:27,470
intact forest next please and what

487
00:20:31,720 --> 00:20:29,930
you're seeing here is a political

488
00:20:34,030 --> 00:20:31,730

boundary from space this image was

489
00:20:36,130 --> 00:20:34,040
acquired in the mid 80s and you can

490
00:20:38,470 --> 00:20:36,140
actually see a political boundary from

491
00:20:39,850 --> 00:20:38,480
space due to the d4

492
00:20:43,030 --> 00:20:39,860
station that occurred on the Mexican

493
00:20:45,330 --> 00:20:43,040
side of the border and Guatemala still

494
00:20:47,440 --> 00:20:45,340
had its forests intact and that image

495
00:20:49,600 --> 00:20:47,450
extremely powerful is published in

496
00:20:51,159 --> 00:20:49,610
National Geographic and it got the

497
00:20:53,470 --> 00:20:51,169
presidents of Guatemala and Mexico

498
00:20:55,900 --> 00:20:53,480
together for the first time in many

499
00:20:58,950 --> 00:20:55,910
years and the congress and president of

500
00:21:02,049 --> 00:20:58,960
guatemala actually use this image as

501
00:21:03,549 --> 00:21:02,059
justification for the maya biosphere

502
00:21:06,070 --> 00:21:03,559
reserve which is the largest protected

503
00:21:08,320 --> 00:21:06,080
area in all of Central America so it's a

504
00:21:10,409 --> 00:21:08,330
great example showing how an image

505
00:21:13,990 --> 00:21:10,419
space-based information can really

506
00:21:19,360 --> 00:21:14,000
affect policy here on earth to protect

507
00:21:22,180 --> 00:21:19,370
our natural resources next please where

508
00:21:23,919 --> 00:21:22,190
NASA looks at Earth from space US aid

509
00:21:25,810 --> 00:21:23,929
works on the ground helping people

510
00:21:28,210 --> 00:21:25,820
around the world make a better life

511
00:21:30,190 --> 00:21:28,220
recover from a disaster striving to live

512
00:21:32,289 --> 00:21:30,200
in a free and democratic country and

513
00:21:35,169 --> 00:21:32,299

what's exciting with the renewed focus

514
00:21:37,000 --> 00:21:35,179
on science and technology and innovation

515
00:21:39,310 --> 00:21:37,010
the agency's really have formed what I

516
00:21:42,850 --> 00:21:39,320
sometimes call a space to village

517
00:21:45,039 --> 00:21:42,860
relationship next please and one of the

518
00:21:47,169 --> 00:21:45,049
ways that that NASA and US aid are

519
00:21:49,270 --> 00:21:47,179
working together is through the severe

520
00:21:51,669 --> 00:21:49,280
project and severe which is Spanish to

521
00:21:53,049 --> 00:21:51,679
serve is a joint agency effort to use

522
00:21:55,060 --> 00:21:53,059
satellite imagery and geospatial

523
00:21:57,159 --> 00:21:55,070
information to improve decision-making

524
00:22:00,039 --> 00:21:57,169
in the developing world and this is done

525
00:22:02,680 --> 00:22:00,049
through satellite imagery and in maps

526
00:22:05,200 --> 00:22:02,690
and visualization tools and monitoring

527
00:22:08,260 --> 00:22:05,210
capabilities and and training and

528
00:22:10,810 --> 00:22:08,270
partnerships and NASA through the

529
00:22:13,720 --> 00:22:10,820
Applied Sciences program enables science

530
00:22:15,909 --> 00:22:13,730
and applications and US aid provides its

531
00:22:18,130 --> 00:22:15,919
development expertise it enables the

532
00:22:20,080 --> 00:22:18,140
partnerships and the in-country staff

533
00:22:21,940 --> 00:22:20,090
and infrastructure so it's a fantastic

534
00:22:23,799 --> 00:22:21,950
relationship and I as well want to

535
00:22:26,560 --> 00:22:23,809
acknowledge my counterpart Carrie Stokes

536
00:22:28,240 --> 00:22:26,570
and thanks to her servia really is

537
00:22:30,310 --> 00:22:28,250
becoming a global network and I also

538
00:22:33,039 --> 00:22:30,320

want to acknowledge my NASA headquarters

539
00:22:34,350 --> 00:22:33,049
colleagues woody Turner and Lawrence

540
00:22:36,970 --> 00:22:34,360
friedel from the Applied Sciences

541
00:22:39,039 --> 00:22:36,980
program who have been so critical in

542
00:22:42,460 --> 00:22:39,049
making severe what it is today next

543
00:22:45,039 --> 00:22:42,470
please so severe is a is becoming a

544
00:22:46,810 --> 00:22:45,049
global network it consists of a program

545
00:22:47,860 --> 00:22:46,820
coordination office at the NASA Marshall

546
00:22:50,560 --> 00:22:47,870
Space Flight Center in Huntsville

547
00:22:51,790 --> 00:22:50,570
Alabama and we team we bring the

548
00:22:54,010 --> 00:22:51,800
expertise from all of the

549
00:22:56,860 --> 00:22:54,020
NASA centers that are doing relevant

550
00:22:59,740 --> 00:22:56,870
work to earth science including Goddard

551
00:23:02,020 --> 00:22:59,750
and and JPL and ames and Langley and

552
00:23:05,200 --> 00:23:02,030
Stennis and we bring that expertise and

553
00:23:08,200 --> 00:23:05,210
knowledge and then we have as was said

554
00:23:10,210 --> 00:23:08,210
previously we have these regional

555
00:23:13,450 --> 00:23:10,220
centers and that's really where the work

556
00:23:15,070 --> 00:23:13,460
gets done we provide that knowledge and

557
00:23:17,650 --> 00:23:15,080
science and expertise but thanks to us

558
00:23:20,290 --> 00:23:17,660
aid we can enable these partnerships in

559
00:23:22,510 --> 00:23:20,300
many places such as Panama for severe

560
00:23:26,170 --> 00:23:22,520
Mesoamerica at an organization called

561
00:23:29,200 --> 00:23:26,180
Cadillac in East Africa at RCM rd for

562
00:23:32,380 --> 00:23:29,210
server east africa and most recently a

563
00:23:36,760 --> 00:23:32,390

severe himalaya at ec mod in Katmandu

564
00:23:38,800 --> 00:23:36,770
Nepal next please in severe teams at

565
00:23:40,180 --> 00:23:38,810
cadillac and RC Mr D and E seem odd

566
00:23:41,650 --> 00:23:40,190
they're made up of young and

567
00:23:44,500 --> 00:23:41,660
enthusiastic scientists and researchers

568
00:23:46,180 --> 00:23:44,510
not much older than the students here in

569
00:23:48,940 --> 00:23:46,190
the room and they represent the

570
00:23:53,620 --> 00:23:48,950
different countries that we work in next

571
00:23:56,470 --> 00:23:53,630
please in examples of some of the things

572
00:23:59,440 --> 00:23:56,480
that we do fires through slash and burn

573
00:24:01,390 --> 00:23:59,450
agriculture devastate the landscape in

574
00:24:03,370 --> 00:24:01,400
many places around the world for example

575
00:24:06,490 --> 00:24:03,380
in Central America you can see in that

576
00:24:08,440 --> 00:24:06,500
image the red spots that are the fire

577
00:24:10,900 --> 00:24:08,450
hot spots detected by the modis sensors

578
00:24:12,940 --> 00:24:10,910
aboard the Terran Aqua satellites in the

579
00:24:15,130 --> 00:24:12,950
smoke that is actually crossing the Gulf

580
00:24:17,050 --> 00:24:15,140
of Mexico and going into Mexico in the

581
00:24:18,880 --> 00:24:17,060
United States so we're able to use

582
00:24:20,590 --> 00:24:18,890
satellites to see where these fires are

583
00:24:23,260 --> 00:24:20,600
to help for example the country of

584
00:24:24,940 --> 00:24:23,270
Guatemala see where the fires are they

585
00:24:27,570 --> 00:24:24,950
have limited resources and they can use

586
00:24:29,710 --> 00:24:27,580
this information in real-time and

587
00:24:31,630 --> 00:24:29,720
operationally to help put their

588
00:24:32,860 --> 00:24:31,640

firefighting resources out to the

589
00:24:35,020 --> 00:24:32,870
communities where these fires are

590
00:24:37,480 --> 00:24:35,030
occurring and sometimes they don't even

591
00:24:39,910 --> 00:24:37,490
know that the fires are occurring until

592
00:24:42,280 --> 00:24:39,920
they see the satellite image which comes

593
00:24:45,100 --> 00:24:42,290
in daily and then we've taken it a step

594
00:24:46,750 --> 00:24:45,110
further by creating a fire forecast

595
00:24:49,120 --> 00:24:46,760
model with the country of Guatemala

596
00:24:50,890 --> 00:24:49,130
actually they took the lead in

597
00:24:53,290 --> 00:24:50,900
developing it some researchers for

598
00:24:54,790 --> 00:24:53,300
example Victor ooga Ramos in in in their

599
00:24:56,440 --> 00:24:54,800
Park Service where they take the

600
00:24:57,640 --> 00:24:56,450
satellite data and they bring it

601
00:24:59,440 --> 00:24:57,650
together with models and they can

602
00:25:00,820 --> 00:24:59,450
actually predict the areas that forest

603
00:25:04,300 --> 00:25:00,830
fires are going to occur providing a

604
00:25:05,560 --> 00:25:04,310
forecast makes please a few years ago

605
00:25:07,570 --> 00:25:05,570
there was an algal bloom off the

606
00:25:09,640 --> 00:25:07,580
coast of Central America which affects

607
00:25:10,780 --> 00:25:09,650
sea life and the safety of swimming at

608
00:25:13,450 --> 00:25:10,790
beaches and we worked with the

609
00:25:16,300 --> 00:25:13,460
government of El Salvador to customize

610
00:25:18,340 --> 00:25:16,310
products you can see that red area which

611
00:25:20,530 --> 00:25:18,350
is the intense chlorophyll concentration

612
00:25:22,540 --> 00:25:20,540
which developed into a red tide and the

613
00:25:24,730 --> 00:25:22,550

government said of El Salvador said that

614
00:25:26,260 --> 00:25:24,740
this type of product saves them 14

615
00:25:30,360 --> 00:25:26,270
million dollars to their fishing

616
00:25:33,880 --> 00:25:30,370
industry every year next please and in

617
00:25:35,590 --> 00:25:33,890
Guatemala this is a lake called Lake

618
00:25:37,480 --> 00:25:35,600
atitlán and it's one of the most

619
00:25:39,100 --> 00:25:37,490
beautiful lakes in the world it's a lake

620
00:25:41,230 --> 00:25:39,110
that's completely surrounded by

621
00:25:43,780 --> 00:25:41,240
volcanoes but you can also see because

622
00:25:45,630 --> 00:25:43,790
of the landscape that yellow line that's

623
00:25:49,390 --> 00:25:45,640
the watershed so it's an incompletely

624
00:25:50,950 --> 00:25:49,400
enclosed watershed and you have villages

625
00:25:53,310 --> 00:25:50,960
around the lake and a little over a year

626
00:25:56,730 --> 00:25:53,320
ago they started reporting a

627
00:26:00,460 --> 00:25:56,740
cyanobacteria outbreak in the lake and

628
00:26:02,860 --> 00:26:00,470
then we use the NASA satellites to to

629
00:26:06,100 --> 00:26:02,870
take an image of that and you can see

630
00:26:07,750 --> 00:26:06,110
that green in the image is the

631
00:26:09,880 --> 00:26:07,760
cyanobacteria that was detected on the

632
00:26:11,740 --> 00:26:09,890
surface of the lake and that image it

633
00:26:14,440 --> 00:26:11,750
was so powerful it made the front page

634
00:26:17,170 --> 00:26:14,450
of Guatemala's largest newspaper and

635
00:26:19,330 --> 00:26:17,180
resulted in an action plan to clean up

636
00:26:21,400 --> 00:26:19,340
the lake so and and of course US aid is

637
00:26:23,590 --> 00:26:21,410
is critically important than in that

638
00:26:26,050 --> 00:26:23,600

plan to work with the communities to

639
00:26:29,130 --> 00:26:26,060
clean up the lake next please and of

640
00:26:31,450 --> 00:26:29,140
course the pakistan floods were

641
00:26:33,700 --> 00:26:31,460
devastating but one of the best ways

642
00:26:36,250 --> 00:26:33,710
they were so extensive that one of the

643
00:26:37,450 --> 00:26:36,260
best ways to to understand the extent of

644
00:26:41,530 --> 00:26:37,460
the flooding was through satellite

645
00:26:45,460 --> 00:26:41,540
imagery and we threw our severe himalaya

646
00:26:47,080 --> 00:26:45,470
group a TC mod developed maps us often

647
00:26:49,300 --> 00:26:47,090
times several times weekly to show the

648
00:26:51,670 --> 00:26:49,310
extent of the flood as it occurred

649
00:26:54,160 --> 00:26:51,680
throughout last fall and then seeing how

650
00:26:56,560 --> 00:26:54,170
that flood affected infrastructure and

651
00:26:58,420 --> 00:26:56,570
affected agriculture so the products

652
00:27:01,210 --> 00:26:58,430
became heavily used during the pakistan

653
00:27:03,610 --> 00:27:01,220
flood event next please and of course

654
00:27:07,300 --> 00:27:03,620
training and capacity building is so

655
00:27:08,860 --> 00:27:07,310
critical to enable the researchers and

656
00:27:11,350 --> 00:27:08,870
the scientists and the students around

657
00:27:14,020 --> 00:27:11,360
the world to use these tools so they can

658
00:27:16,000 --> 00:27:14,030
integrate them into their work and make

659
00:27:18,910 --> 00:27:16,010
better decisions and we have a program

660
00:27:19,620 --> 00:27:18,920
in East Africa called mykko severe

661
00:27:21,090 --> 00:27:19,630
together with the

662
00:27:24,030 --> 00:27:21,100
american association of geographers

663
00:27:26,790 --> 00:27:24,040

that's giving students from africa new

664
00:27:28,530 --> 00:27:26,800
opportunities to use satellite data so

665
00:27:30,270 --> 00:27:28,540
you have students as you can see in the

666
00:27:33,240 --> 00:27:30,280
picture that that oftentimes don't have

667
00:27:34,830 --> 00:27:33,250
the the resources and the ability to use

668
00:27:37,290 --> 00:27:34,840
this information and now they're doing

669
00:27:39,780 --> 00:27:37,300
all sorts of projects such as looking at

670
00:27:43,080 --> 00:27:39,790
the land cover and biodiversity and food

671
00:27:47,100 --> 00:27:43,090
security in countries such as Uganda and

672
00:27:48,990 --> 00:27:47,110
Kenya next please and of course as I

673
00:27:51,120 --> 00:27:49,000
mentioned earlier our earth is facing a

674
00:27:53,340 --> 00:27:51,130
transformation like we've never seen

675
00:27:55,260 --> 00:27:53,350
before throughout human history I showed

676
00:27:57,960 --> 00:27:55,270
some examples from Bolivia and from

677
00:27:59,850 --> 00:27:57,970
Mexico but I always feel like the image

678
00:28:02,130 --> 00:27:59,860
of earth city lights gives us the

679
00:28:04,230 --> 00:28:02,140
feeling of of the extent of the human

680
00:28:08,790 --> 00:28:04,240
impact that's occurring on our planet

681
00:28:10,770 --> 00:28:08,800
Earth thanks please and to provide

682
00:28:13,410 --> 00:28:10,780
additional observations during extreme

683
00:28:16,050 --> 00:28:13,420
events and humanitarian crises NASA is

684
00:28:18,000 --> 00:28:16,060
now developing a pathfinder camera

685
00:28:20,070 --> 00:28:18,010
system called I serve for the

686
00:28:22,860 --> 00:28:20,080
International Space Station taking

687
00:28:25,170 --> 00:28:22,870
advantage of ISS is unique orbit and the

688
00:28:27,600 --> 00:28:25,180

crew support so during future events

689
00:28:30,510 --> 00:28:27,610
NASA and US aid we can work together and

690
00:28:34,880 --> 00:28:30,520
share that imagery during during events

691
00:28:38,010 --> 00:28:34,890
next please now the Maya civilization

692
00:28:41,370 --> 00:28:38,020
you can see the the ancient city of

693
00:28:43,610 --> 00:28:41,380
mirador it covered many parts of Central

694
00:28:45,210 --> 00:28:43,620
America and was one of the most advanced

695
00:28:48,480 --> 00:28:45,220
civilizations throughout human history

696
00:28:50,520 --> 00:28:48,490
but around 800 AD something happened the

697
00:28:53,190 --> 00:28:50,530
civilization collapse and it's estimated

698
00:28:55,500 --> 00:28:53,200
that 10 million people perished and we

699
00:28:57,180 --> 00:28:55,510
now know that the Maya had cut down most

700
00:29:00,420 --> 00:28:57,190
of their trees to make their temples and

701
00:29:02,820 --> 00:29:00,430
and this affected the local climatic

702
00:29:04,970 --> 00:29:02,830
conditions and you had natural regional

703
00:29:07,230 --> 00:29:04,980
conditions that were occurring causing

704
00:29:09,270 --> 00:29:07,240
what we believe to be a great drought

705
00:29:11,430 --> 00:29:09,280
and most of the experts believe that is

706
00:29:13,860 --> 00:29:11,440
the drought that caused the demise of

707
00:29:16,140 --> 00:29:13,870
the Maya civilization and as smart as

708
00:29:17,760 --> 00:29:16,150
they were they didn't see it coming they

709
00:29:19,170 --> 00:29:17,770
could not adapt to the natural and

710
00:29:21,360 --> 00:29:19,180
human-induced changes to their

711
00:29:24,840 --> 00:29:21,370
environment and one sometimes wonders

712
00:29:27,030 --> 00:29:24,850
had desmaya brilliant astronomers

713
00:29:29,850 --> 00:29:27,040

mathematicians had they had had they had

714
00:29:32,160 --> 00:29:29,860
the tools that we have today the ability

715
00:29:33,090 --> 00:29:32,170
to observe their earth or the ability to

716
00:29:35,340 --> 00:29:33,100
then take that

717
00:29:37,620 --> 00:29:35,350
information and such as USA does do

718
00:29:40,770 --> 00:29:37,630
something about it and today we faced

719
00:29:42,270 --> 00:29:40,780
similar challenges is our landscape is

720
00:29:44,520 --> 00:29:42,280
changing and we deal with natural

721
00:29:46,289 --> 00:29:44,530
forcings on the environment however with

722
00:29:49,350 --> 00:29:46,299
our eyes on this in the sky and our

723
00:29:51,390 --> 00:29:49,360
boots on the ground NASA and US aid and

724
00:29:53,640 --> 00:29:51,400
our partner organizations and countries

725
00:29:56,159 --> 00:29:53,650
we have the tools and we have the

726
00:29:57,659 --> 00:29:56,169
knowledge to better avoid making the

727
00:29:59,669 --> 00:29:57,669
same mistakes of the past and working

728
00:30:01,740 --> 00:29:59,679
together to make the world a better

729
00:30:17,909 --> 00:30:01,750
place for generations to come next

730
00:30:20,029 --> 00:30:17,919
please thank you very much thank you Dan

731
00:30:22,980 --> 00:30:20,039
and Carrie thanks for that wonderful

732
00:30:23,970 --> 00:30:22,990
very informative presentation and we

733
00:30:26,370 --> 00:30:23,980
really appreciate the work you're doing

734
00:30:27,899 --> 00:30:26,380
together this relationship next would

735
00:30:31,110 --> 00:30:27,909
like to introduce two young innovators

736
00:30:33,049 --> 00:30:31,120
who work with usaid in nasa the state

737
00:30:35,130 --> 00:30:33,059
department in nike on the launch project

738
00:30:38,520 --> 00:30:35,140

okay i'll get you guys to print a minute

739
00:30:40,980 --> 00:30:38,530
Josh Nesbitt is a CEO of medic mobile

740
00:30:43,590 --> 00:30:40,990
and Dietrich Lawson is his chief

741
00:30:45,630 --> 00:30:43,600
technology officer medic mobile develops

742
00:30:47,820 --> 00:30:45,640
and extends existing open source

743
00:30:50,090 --> 00:30:47,830
platform to support community health

744
00:30:52,799 --> 00:30:50,100
worker coordination and management

745
00:30:55,260 --> 00:30:52,809
community mobilization for vaccination

746
00:30:57,980 --> 00:30:55,270
and satellite clinics as well as

747
00:31:00,930 --> 00:30:57,990
logistics and supply chain management

748
00:31:03,210 --> 00:31:00,940
referrals routine data collection and

749
00:31:04,740 --> 00:31:03,220
mapping of health services their

750
00:31:06,990 --> 00:31:04,750
innovative technology has provided

751
00:31:09,270 --> 00:31:07,000
critical support to developing countries

752
00:31:12,899 --> 00:31:09,280
in Africa and elsewhere around the globe

753
00:31:18,320 --> 00:31:12,909
please join me in welcoming Josh Nesbitt

754
00:31:22,649 --> 00:31:21,180
it's it's really amazing to be here and

755
00:31:24,899 --> 00:31:22,659
it is not every day that you're

756
00:31:26,039 --> 00:31:24,909
introduced by an astronaut so I think

757
00:31:29,370 --> 00:31:26,049
that we can check that off our bucket

758
00:31:31,710 --> 00:31:29,380
list so I want to jump right into it

759
00:31:36,269 --> 00:31:31,720
with the first slide if we can bring

760
00:31:38,850 --> 00:31:36,279
them up hopefully so medic mobile

761
00:31:40,950 --> 00:31:38,860
started its work if you go to the next

762
00:31:43,379 --> 00:31:40,960
slide again many mobile swords work in

763
00:31:46,259 --> 00:31:43,389

2008 at a single Hospital in rural

764
00:31:48,389 --> 00:31:46,269
Malawi where two doctors were serving a

765
00:31:49,950 --> 00:31:48,399
quarter million people spread 100 miles

766
00:31:53,220 --> 00:31:49,960
in every direction so you literally had

767
00:31:55,259 --> 00:31:53,230
patients were walking 60 80 100 miles to

768
00:31:56,909 --> 00:31:55,269
access care if you go to the next slide

769
00:31:59,039 --> 00:31:56,919
you'll see a picture of Dixon in the

770
00:32:01,379 --> 00:31:59,049
middle of the photo here and Dixon was

771
00:32:04,110 --> 00:32:01,389
one of about 500 volunteer community

772
00:32:07,110 --> 00:32:04,120
health workers who had been charged and

773
00:32:09,000 --> 00:32:07,120
had stepped up himself to decentralize

774
00:32:11,940 --> 00:32:09,010
patient care and be the frontline of

775
00:32:13,289 --> 00:32:11,950
global health in his local community and

776
00:32:15,269 --> 00:32:13,299
I had a conversation with Dixon one day

777
00:32:17,909 --> 00:32:15,279
and he said he was walking 45 miles

778
00:32:19,860 --> 00:32:17,919
every four days to hand deliver paper

779
00:32:21,210 --> 00:32:19,870
reports and it was really clear that

780
00:32:23,700 --> 00:32:21,220
these health workers were just as

781
00:32:25,769 --> 00:32:23,710
disconnected as the patients were from

782
00:32:27,450 --> 00:32:25,779
this clinic and its resources but I had

783
00:32:29,940 --> 00:32:27,460
a better mobile phone signal in rural

784
00:32:32,340 --> 00:32:29,950
Malawi than i did in Palo Alto I was a

785
00:32:34,889 --> 00:32:32,350
Stanford undergrad at the time and I met

786
00:32:36,899 --> 00:32:34,899
a guy who was coding and hacking away

787
00:32:38,940 --> 00:32:36,909
living out of a van on the edge of

788
00:32:40,950 --> 00:32:38,950

campus creating a really useful piece of

789
00:32:43,680 --> 00:32:40,960
software and on the next slide you'll

790
00:32:45,600 --> 00:32:43,690
see a shot of frontline SMS the front

791
00:32:48,029 --> 00:32:45,610
line basically runs on any laptop any

792
00:32:51,180 --> 00:32:48,039
desktop you plug in a mobile phone

793
00:32:53,070 --> 00:32:51,190
tethered by USB cable or a gsm modem

794
00:32:54,779 --> 00:32:53,080
with a local sim card and without the

795
00:32:56,430 --> 00:32:54,789
internet you have a functioning SMS

796
00:32:59,009 --> 00:32:56,440
server this is really all that we needed

797
00:33:01,350 --> 00:32:59,019
so to go to the next slide we went back

798
00:33:03,509 --> 00:33:01,360
to the clinic distributed ten-dollar

799
00:33:06,090 --> 00:33:03,519
mobile phones seven dollar solar panels

800
00:33:08,100 --> 00:33:06,100
and set up an SMS SMS coordination

801
00:33:10,529 --> 00:33:08,110
system and saw some really amazing

802
00:33:12,210 --> 00:33:10,539
things happen in just six months the

803
00:33:13,919 --> 00:33:12,220
next slide shows an intervention really

804
00:33:16,409 --> 00:33:13,929
simple for the first time ever there was

805
00:33:17,789 --> 00:33:16,419
localized emergency care and 150

806
00:33:19,680 --> 00:33:17,799
patients receive care that wouldn't have

807
00:33:22,379 --> 00:33:19,690
been seen otherwise the next slide shows

808
00:33:24,600 --> 00:33:22,389
a new patient tracking system that they

809
00:33:26,700 --> 00:33:24,610
implemented for HIV TB in home-based

810
00:33:28,619 --> 00:33:26,710
care and this save them thousands of

811
00:33:30,450 --> 00:33:28,629
dollars in thousands of hours in travel

812
00:33:31,680 --> 00:33:30,460
and work time and the running operations

813
00:33:33,330 --> 00:33:31,690

cost for this program

814
00:33:35,850 --> 00:33:33,340
five hundred dollars over that first six

815
00:33:37,350 --> 00:33:35,860
months and maybe the most exciting use

816
00:33:39,330 --> 00:33:37,360
case intervention is on the next slide

817
00:33:40,740 --> 00:33:39,340
they started and this is something the

818
00:33:42,600 --> 00:33:40,750
health workers did on their own actually

819
00:33:45,090 --> 00:33:42,610
they sort of doing active case finding

820
00:33:46,799 --> 00:33:45,100
for tuberculosis started finding

821
00:33:48,810 --> 00:33:46,809
symptoms in the communities and

822
00:33:49,680 --> 00:33:48,820
referring them for care and they doubled

823
00:33:51,480 --> 00:33:49,690
the number of patients that were

824
00:33:53,399 --> 00:33:51,490
treating for TB in just six months

825
00:33:56,159 --> 00:33:53,409
through a really simple communication

826
00:33:58,710 --> 00:33:56,169
system so we had these aha moments and

827
00:34:01,740 --> 00:33:58,720
to go to the next slide fast forward two

828
00:34:04,680 --> 00:34:01,750
years or a team of ten full time and we

829
00:34:06,029 --> 00:34:04,690
now work in 12 countries and places that

830
00:34:08,790 --> 00:34:06,039
we work and challenges that we're

831
00:34:11,099 --> 00:34:08,800
tackling it's places where mobile is

832
00:34:13,409 --> 00:34:11,109
sometimes the best but also often own

833
00:34:15,839 --> 00:34:13,419
the only way to get the information that

834
00:34:17,639 --> 00:34:15,849
you need to take action an example of

835
00:34:20,010 --> 00:34:17,649
that is in DRC so if you look at the

836
00:34:22,800 --> 00:34:20,020
next slide on the right this is a

837
00:34:25,589 --> 00:34:22,810
delivery bed in a health post and on the

838
00:34:27,359 --> 00:34:25,599

left this is a medical record system at

839
00:34:30,389 --> 00:34:27,369
the biggest government hospital in

840
00:34:32,540 --> 00:34:30,399
Kinshasa and in this situation there is

841
00:34:35,159 --> 00:34:32,550
no emergency transport coordination

842
00:34:37,109 --> 00:34:35,169
there is no coordinated patient

843
00:34:38,430 --> 00:34:37,119
referrals and at some of the health

844
00:34:42,059 --> 00:34:38,440
posts that we visited a couple of weeks

845
00:34:43,950 --> 00:34:42,069
back fully 10% of mothers delivering our

846
00:34:45,750 --> 00:34:43,960
dying of complications it's just

847
00:34:48,030 --> 00:34:45,760
unacceptable and mobile is not a

848
00:34:51,000 --> 00:34:48,040
solution is a tool that paired with

849
00:34:52,530 --> 00:34:51,010
people becomes a solution but we're

850
00:34:54,329 --> 00:34:52,540
excited about the very specific

851
00:34:56,639 --> 00:34:54,339
challenges in gaps that mobile might

852
00:34:57,930 --> 00:34:56,649
help to bridge I'm going to pass it off

853
00:35:00,599 --> 00:34:57,940
to Deitrick to talk a little bit about

854
00:35:02,670 --> 00:35:00,609
the technology thanks Josh as you said

855
00:35:04,490 --> 00:35:02,680
I'm Dietrich and I'm the CTO of medic

856
00:35:06,750 --> 00:35:04,500
mobile and if you go to the next slide

857
00:35:08,910 --> 00:35:06,760
you'll josh previously talked about

858
00:35:10,680 --> 00:35:08,920
frontline SMS I now I just want to talk

859
00:35:12,120 --> 00:35:10,690
about a few of the the software things

860
00:35:13,440 --> 00:35:12,130
that we're doing with frontline SMS some

861
00:35:15,030 --> 00:35:13,450
of the stuff that we built on top of it

862
00:35:17,099 --> 00:35:15,040
and some of what we're using it for and

863
00:35:18,900 --> 00:35:17,109

so this is front line forms and it's

864
00:35:20,069 --> 00:35:18,910
built on top of frontline SMS and it's

865
00:35:21,630 --> 00:35:20,079
really interesting because it allows you

866
00:35:23,970 --> 00:35:21,640
to do data collection on really low-end

867
00:35:26,040 --> 00:35:23,980
handsets in typically when you do data

868
00:35:28,650 --> 00:35:26,050
collection you have to buy PDAs or you

869
00:35:30,720 --> 00:35:28,660
have to buy smartphones but this is a

870
00:35:32,250 --> 00:35:30,730
forty-dollar java enabled phone it's a

871
00:35:34,079 --> 00:35:32,260
lot cheaper than most of the other

872
00:35:35,550 --> 00:35:34,089
options out there and you just fill it

873
00:35:37,470 --> 00:35:35,560
out on them on your phone hit Send and

874
00:35:39,390 --> 00:35:37,480
the data is encoded in a text message

875
00:35:42,240 --> 00:35:39,400
and sent via SMS back to the main hub

876
00:35:44,010 --> 00:35:42,250
and this is this allows us to do a lot

877
00:35:45,450 --> 00:35:44,020
of really interesting things so if you

878
00:35:47,220 --> 00:35:45,460
go to the next slide one of these

879
00:35:48,599 --> 00:35:47,230
things is stock level reporting so

880
00:35:50,400 --> 00:35:48,609
envision that you have a bunch of health

881
00:35:52,170 --> 00:35:50,410
posts sort of scattered around an area

882
00:35:54,060 --> 00:35:52,180
and they all depend on a central health

883
00:35:55,560 --> 00:35:54,070
office to distribute medicines to them

884
00:35:58,260 --> 00:35:55,570
so that they can distribute them to the

885
00:36:00,450 --> 00:35:58,270
patients in turn previously the system

886
00:36:01,800 --> 00:36:00,460
was very badly coordinated some of the

887
00:36:03,750 --> 00:36:01,810
health posts might run out of medicine

888
00:36:05,730 --> 00:36:03,760

and patients wouldn't get the care that

889
00:36:07,500 --> 00:36:05,740
they need now these health posts can

890
00:36:08,730 --> 00:36:07,510
communicate with the central hub and get

891
00:36:10,140 --> 00:36:08,740
the medicines that they need and all the

892
00:36:11,130 --> 00:36:10,150
patients get care so if you go to the

893
00:36:12,750 --> 00:36:11,140
next slide you'll see something else

894
00:36:14,970 --> 00:36:12,760
that we're doing with frontline forms

895
00:36:17,160 --> 00:36:14,980
which is patient view so you know Josh

896
00:36:18,750 --> 00:36:17,170
showed that slide of all of the medical

897
00:36:20,280 --> 00:36:18,760
records in the Democratic Republic of

898
00:36:22,920 --> 00:36:20,290
Congo you know all of the red pieces of

899
00:36:24,960 --> 00:36:22,930
paper on that on that shelf inpatient

900
00:36:26,760 --> 00:36:24,970
view is built to replace that right

901
00:36:29,849 --> 00:36:26,770
because it's pretty inefficient and we

902
00:36:31,410 --> 00:36:29,859
really we want to provide them with a

903
00:36:33,270 --> 00:36:31,420
better option so patient view is a

904
00:36:34,500 --> 00:36:33,280
medical record specifically built for

905
00:36:36,450 --> 00:36:34,510
the areas that we work in that has a

906
00:36:37,980 --> 00:36:36,460
heavy emphasis on mobile so it has basic

907
00:36:39,210 --> 00:36:37,990
functionalities like a normal medical

908
00:36:41,220 --> 00:36:39,220
record you can collect data about

909
00:36:42,839 --> 00:36:41,230
patience you have patient profiles you

910
00:36:44,820 --> 00:36:42,849
have health worker profiles but it also

911
00:36:46,890 --> 00:36:44,830
has a lot of mobile features like you

912
00:36:48,390 --> 00:36:46,900
can send SMS between health workers you

913
00:36:50,280 --> 00:36:48,400

can collect data from the field using

914
00:36:52,020 --> 00:36:50,290
front line forms and it's really

915
00:36:53,430 --> 00:36:52,030
specifically targeted for some of the

916
00:36:55,140 --> 00:36:53,440
gaps that Josh was talking about earlier

917
00:36:57,030 --> 00:36:55,150
you know he was talking about how Dixon

918
00:36:58,710 --> 00:36:57,040
might have to walk 40 miles to deliver a

919
00:37:00,599 --> 00:36:58,720
report well now Dixon can just you know

920
00:37:02,460 --> 00:37:00,609
type in on his phone hit Send that's all

921
00:37:04,560 --> 00:37:02,470
he has to do and so so it's really

922
00:37:06,390 --> 00:37:04,570
exciting we also wanted to bring mobile

923
00:37:07,829 --> 00:37:06,400
to other medical records as well so if

924
00:37:09,660 --> 00:37:07,839
you go to the next slide you'll see a

925
00:37:12,270 --> 00:37:09,670
screenshot of the openmrs messaging

926
00:37:13,740 --> 00:37:12,280
module so openmrs is a free and open

927
00:37:15,240 --> 00:37:13,750
source medical record system that's

928
00:37:16,950 --> 00:37:15,250
again built specifically for the

929
00:37:18,390 --> 00:37:16,960
developing world and it is used in a lot

930
00:37:20,790 --> 00:37:18,400
of the larger hospitals so we're talking

931
00:37:23,160 --> 00:37:20,800
about 100,000 patients or more and the

932
00:37:25,260 --> 00:37:23,170
messaging module allows openmrs to send

933
00:37:27,240 --> 00:37:25,270
and receive all kinds of messages so SMS

934
00:37:28,349 --> 00:37:27,250
Twitter email and other stuff and it's

935
00:37:30,030 --> 00:37:28,359
going to be used in the future to send

936
00:37:31,589 --> 00:37:30,040
reminders so that health workers

937
00:37:33,660 --> 00:37:31,599
remember to vaccinate their patients and

938
00:37:36,930 --> 00:37:33,670

also coordinate messaging inside and out

939
00:37:38,849 --> 00:37:36,940
of openmrs and go to the next slide so

940
00:37:40,740 --> 00:37:38,859
what you see here is text forms now

941
00:37:42,630 --> 00:37:40,750
front line forms is really good for

942
00:37:45,180 --> 00:37:42,640
low-end data collection but we wanted to

943
00:37:46,500 --> 00:37:45,190
drive the cost even lower so we created

944
00:37:48,900 --> 00:37:46,510
text forms which allows you to collect

945
00:37:52,170 --> 00:37:48,910
data using just plain text SMS sent from

946
00:37:53,910 --> 00:37:52,180
any handset with SMS capability and this

947
00:37:55,680 --> 00:37:53,920
is you know very very useful it was

948
00:37:57,839 --> 00:37:55,690
created specifically in the aftermath of

949
00:37:58,750 --> 00:37:57,849
the haiti earthquake when we partnered

950
00:38:00,400 --> 00:37:58,760
with google created

951
00:38:02,380 --> 00:38:00,410
it would allow hospitals to share data

952
00:38:04,150 --> 00:38:02,390
about availability and so a lot of these

953
00:38:05,530 --> 00:38:04,160
places all hospitals needed to know

954
00:38:07,330 --> 00:38:05,540
where they could transfer patients or

955
00:38:09,310 --> 00:38:07,340
like where had a neurosurgery room or

956
00:38:11,710 --> 00:38:09,320
you know what services were available in

957
00:38:14,170 --> 00:38:11,720
their area and so the hospitals could

958
00:38:16,090 --> 00:38:14,180
send SMS to text forms textem arms would

959
00:38:17,920 --> 00:38:16,100
parse this data into a machine-readable

960
00:38:19,270 --> 00:38:17,930
format and pass it off to resource

961
00:38:21,220 --> 00:38:19,280
finder which is a screenshot that you

962
00:38:23,380 --> 00:38:21,230
see here this is a web app that Google

963
00:38:24,880 --> 00:38:23,390

mid and then the hospital administrators

964
00:38:26,800 --> 00:38:24,890
could go on and click on these green

965
00:38:28,300 --> 00:38:26,810
crosses and see data about these

966
00:38:29,800 --> 00:38:28,310
hospitals at a glance you know this

967
00:38:32,500 --> 00:38:29,810
hospital has 40 available beds this

968
00:38:34,000 --> 00:38:32,510
hospital has a pediatric ward that sort

969
00:38:35,860 --> 00:38:34,010
of thing and so it was really useful for

970
00:38:37,420 --> 00:38:35,870
that so that's all of the stuff that

971
00:38:38,350 --> 00:38:37,430
working on right now I want to talk

972
00:38:40,210 --> 00:38:38,360
about some of the stuff that really

973
00:38:41,830 --> 00:38:40,220
excited for for the future so if you go

974
00:38:43,630 --> 00:38:41,840
to the next slide you'll see a diagram

975
00:38:45,370 --> 00:38:43,640
of an algorithm that our friend Rob

976
00:38:47,530 --> 00:38:45,380
monroe at Stanford created to help us

977
00:38:49,240 --> 00:38:47,540
automatically categorize and tagged text

978
00:38:51,130 --> 00:38:49,250
messages and so this is really really

979
00:38:52,270 --> 00:38:51,140
helpful for health workers that might be

980
00:38:53,830 --> 00:38:52,280
sitting at a health clinic going through

981
00:38:55,300 --> 00:38:53,840
hundreds of messages a day it would be

982
00:38:56,860 --> 00:38:55,310
so useful for them because they have

983
00:38:58,630 --> 00:38:56,870
lots of important things to do it be

984
00:39:00,490 --> 00:38:58,640
useful for them to have a you know a tag

985
00:39:03,100 --> 00:39:00,500
that says administrative or urgent care

986
00:39:04,480 --> 00:39:03,110
required or you know medicine requests

987
00:39:06,310 --> 00:39:04,490
so that they can more quickly go through

988
00:39:07,750 --> 00:39:06,320

these text messages sort them out easier

989
00:39:09,580 --> 00:39:07,760
and get on with other things that they

990
00:39:10,600 --> 00:39:09,590
have to do another thing that we're

991
00:39:13,180 --> 00:39:10,610
excited about if you go to the next

992
00:39:14,650 --> 00:39:13,190
slide is sell a phone so this was

993
00:39:16,750 --> 00:39:14,660
created actually by a fellow launch

994
00:39:19,330 --> 00:39:16,760
innovator called named dr. oz Jean out

995
00:39:21,850 --> 00:39:19,340
of UCLA and what it is it's a piece of

996
00:39:24,160 --> 00:39:21,860
technology that allows you to do to take

997
00:39:25,630 --> 00:39:24,170
cellular level images of blood and other

998
00:39:28,060 --> 00:39:25,640
liquids on the back of a camera phone

999
00:39:30,610 --> 00:39:28,070
using only a fifteen dollar add on to

1000
00:39:32,350 --> 00:39:30,620
that camera phone and so what the way it

1001
00:39:33,640 --> 00:39:32,360
works is you put the blood on a slide

1002
00:39:36,130 --> 00:39:33,650
and you take can take a picture of it

1003
00:39:38,770 --> 00:39:36,140
with the phone and then it's sent via

1004
00:39:41,590 --> 00:39:38,780
SMS sorry back to the server the server

1005
00:39:44,230 --> 00:39:41,600
analyzes it and can detect things like

1006
00:39:47,560 --> 00:39:44,240
malaria it can do viral load counts for

1007
00:39:49,150 --> 00:39:47,570
HIV patients it can do cotan water

1008
00:39:51,160 --> 00:39:49,160
testing if you're looking at a water

1009
00:39:53,530 --> 00:39:51,170
slide and we're working to integrate

1010
00:39:56,020 --> 00:39:53,540
this with patient view in bring point of

1011
00:39:57,790 --> 00:39:56,030
care diagnostics in seconds for pennies

1012
00:39:58,810 --> 00:39:57,800
to the developing world and the places

1013
00:40:00,460 --> 00:39:58,820

that we work so we're really excited

1014
00:40:02,080 --> 00:40:00,470
about that I'm going to now turn it back

1015
00:40:03,820 --> 00:40:02,090
to Josh for some closing remarks right

1016
00:40:06,450 --> 00:40:03,830
so if you jump to the next slide we have

1017
00:40:09,370 --> 00:40:06,460
really aggressive plans for growth

1018
00:40:11,470 --> 00:40:09,380
Dietrich's 21 he dropped out of college

1019
00:40:12,370 --> 00:40:11,480
for a bit to work with us because he was

1020
00:40:14,499 --> 00:40:12,380
so passionate about the

1021
00:40:16,480 --> 00:40:14,509
I graduated a little bit early to sort

1022
00:40:18,279 --> 00:40:16,490
of get on with it we're sort of from the

1023
00:40:20,920 --> 00:40:18,289
Silicon Valley and from that mindset and

1024
00:40:22,779 --> 00:40:20,930
we approached scale and impact the same

1025
00:40:25,359 --> 00:40:22,789
way that I think Google and Twitter and

1026
00:40:28,960 --> 00:40:25,369
Facebook approach their user numbers in

1027
00:40:31,900 --> 00:40:28,970
their scale and so we want 250,000

1028
00:40:33,640 --> 00:40:31,910
health workers to use these tools in the

1029
00:40:36,549 --> 00:40:33,650
next three years to improve care for

1030
00:40:39,009 --> 00:40:36,559
millions of patients and programs like

1031
00:40:41,079 --> 00:40:39,019
launch let us do that they let us meet

1032
00:40:43,029 --> 00:40:41,089
corporate partners government agencies

1033
00:40:44,589 --> 00:40:43,039
local and international implementing

1034
00:40:46,930 --> 00:40:44,599
partners that we would never interact

1035
00:40:48,609 --> 00:40:46,940
with and so it's sort of proven to us

1036
00:40:51,640 --> 00:40:48,619
that we're participating in an idea

1037
00:40:54,160 --> 00:40:51,650
economy where what matters is the idea

1038
00:40:55,569 --> 00:40:54,170

and your ability to execute and you can

1039
00:40:57,130 --> 00:40:55,579
move from there so we're really excited

1040
00:40:59,559 --> 00:40:57,140
about launch and the things that it's

1041
00:41:02,410 --> 00:40:59,569
offered but we also wanted to direct to

1042
00:41:04,660 --> 00:41:02,420
directly engage the American people in

1043
00:41:06,089 --> 00:41:04,670
the mission and we were hit with a

1044
00:41:08,980 --> 00:41:06,099
statistic if you go to the next slide

1045
00:41:10,420 --> 00:41:08,990
every single day in the US half a

1046
00:41:12,099 --> 00:41:10,430
million mobile phones we just hit Earth

1047
00:41:13,990 --> 00:41:12,109
Day this is another message half a

1048
00:41:16,359 --> 00:41:14,000
million mobile phones but are being put

1049
00:41:17,650 --> 00:41:16,369
into trash cans and desk drawers and

1050
00:41:20,499 --> 00:41:17,660
every single one of these phones has

1051
00:41:22,809 --> 00:41:20,509
hazardous material but it's also a value

1052
00:41:24,670 --> 00:41:22,819
and so we launched the campaign if you

1053
00:41:26,559 --> 00:41:24,680
go to the next slide called hope phones

1054
00:41:28,690 --> 00:41:26,569
and the pitch is that you can give your

1055
00:41:30,549 --> 00:41:28,700
old phone a new life on the front line

1056
00:41:32,440 --> 00:41:30,559
of global health will take your phone or

1057
00:41:34,329 --> 00:41:32,450
recycle it here in the US and we'll take

1058
00:41:35,799 --> 00:41:34,339
the value of that handset the funding

1059
00:41:38,529 --> 00:41:35,809
that we get from the recycling process

1060
00:41:40,210 --> 00:41:38,539
and use that funding to provide to

1061
00:41:42,640 --> 00:41:40,220
purchase mobile phones in local markets

1062
00:41:44,769 --> 00:41:42,650
for our community health workers so it's

1063
00:41:46,420 --> 00:41:44,779

a green process here in the US we pay

1064
00:41:48,190 --> 00:41:46,430
for your shipping both ways and the

1065
00:41:50,380 --> 00:41:48,200
funding lets us fuel our mobile health

1066
00:41:51,849 --> 00:41:50,390
initiatives abroad so this is a way that

1067
00:41:54,579 --> 00:41:51,859
we can partner directly with the

1068
00:41:57,640 --> 00:41:54,589
American people and I want to land with

1069
00:42:00,370 --> 00:41:57,650
a comment that we really believe in the

1070
00:42:02,559 --> 00:42:00,380
power of partnership especially around

1071
00:42:15,420 --> 00:42:02,569
big challenges and we're really honored

1072
00:42:22,000 --> 00:42:20,290
wow that's all I can say josh and

1073
00:42:22,900 --> 00:42:22,010
Dietrich that's some amazing work that

1074
00:42:24,490 --> 00:42:22,910
you're doing and we're really

1075
00:42:26,140 --> 00:42:24,500
appreciative for what you do to help

1076
00:42:28,450 --> 00:42:26,150
change the world thank you very much

1077
00:42:31,300 --> 00:42:28,460
next what to bring the administrators up

1078
00:42:33,370 --> 00:42:31,310
to the stage to have a question and

1079
00:42:35,940 --> 00:42:33,380
answer session so give them an

1080
00:42:40,090 --> 00:42:35,950
opportunity to ask some questions and

1081
00:42:41,770 --> 00:42:40,100
yeah in anything you want guys in

1082
00:42:43,870 --> 00:42:41,780
astoria okay we'll stay right here all

1083
00:42:46,390 --> 00:42:43,880
right now help facilitate this so anyone

1084
00:42:49,300 --> 00:42:46,400
have any questions any students any

1085
00:42:52,990 --> 00:42:49,310
anyone else don't be shy and we'll also

1086
00:42:55,120 --> 00:42:53,000
put Carrie and Dan and Josh will put you

1087
00:42:56,190 --> 00:42:55,130
guys on the spot in case their questions

1088
00:42:58,960 --> 00:42:56,200

that we don't know how to answer

1089
00:43:00,810 --> 00:42:58,970
definitely so there may be something and

1090
00:43:06,850 --> 00:43:00,820
we do have questions from Twitter also

1091
00:43:09,460 --> 00:43:06,860
if no one knows why don't you yes I was

1092
00:43:13,480 --> 00:43:09,470
just wondering what type of grant sauce

1093
00:43:17,170 --> 00:43:13,490
on programs that you are looking at for

1094
00:43:19,330 --> 00:43:17,180
sustainable systems as we move into the

1095
00:43:22,510 --> 00:43:19,340
next year such that there's college

1096
00:43:25,090 --> 00:43:22,520
students can get involved on the summer

1097
00:43:28,120 --> 00:43:25,100
programs and also some fellowships and

1098
00:43:29,530 --> 00:43:28,130
grants so that we can be so that as they

1099
00:43:33,130 --> 00:43:29,540
were doing we can be out on the front

1100
00:43:35,140 --> 00:43:33,140
line trying to develop some work I'll

1101
00:43:37,750 --> 00:43:35,150
take a shot first we've got a couple of

1102
00:43:39,310 --> 00:43:37,760
things a number of things at NASA we do

1103
00:43:42,190 --> 00:43:39,320
a number of grants through our education

1104
00:43:43,450 --> 00:43:42,200
department that Leland oversees the

1105
00:43:47,170 --> 00:43:43,460
other thing that we're doing brand-new

1106
00:43:50,380 --> 00:43:47,180
is we're trying to fund 500 postgraduate

1107
00:43:52,750 --> 00:43:50,390
or graduate grants in technology through

1108
00:43:56,860 --> 00:43:52,760
our office of chief technologists for

1109
00:43:59,320 --> 00:43:56,870
the 2011-2012 school year and we just

1110
00:44:01,600 --> 00:43:59,330
put the solicitations on the street back

1111
00:44:03,520 --> 00:44:01,610
before the holidays so there's something

1112
00:44:05,230 --> 00:44:03,530
we have not done before and we're hoping

1113
00:44:08,680 --> 00:44:05,240

to be able to do that and that that

1114
00:44:10,330 --> 00:44:08,690
would be for study in any area of

1115
00:44:12,340 --> 00:44:10,340
technology whether it's something that

1116
00:44:15,850 --> 00:44:12,350
you heard josh and any other folk talk

1117
00:44:17,740 --> 00:44:15,860
about or whatever I would just add to

1118
00:44:19,570 --> 00:44:17,750
that to say that US aid has a broad

1119
00:44:21,250 --> 00:44:19,580
range of programs as well for college

1120
00:44:24,670 --> 00:44:21,260
students and university students but

1121
00:44:27,160 --> 00:44:24,680
often geared towards PhDs and postdocs

1122
00:44:28,750 --> 00:44:27,170
fellowships with our new office of

1123
00:44:30,970 --> 00:44:28,760
science and technology Alex do you want

1124
00:44:33,190 --> 00:44:30,980
to put your hand up who runs alex Dagon

1125
00:44:35,640 --> 00:44:33,200
who runs that office and so we're really

1126
00:44:38,349 --> 00:44:35,650
trying to engage with and inspire more

1127
00:44:40,180 --> 00:44:38,359
college students in particular to get

1128
00:44:42,339 --> 00:44:40,190
involved with development but from a

1129
00:44:47,950 --> 00:44:42,349
science and technology perspective so

1130
00:44:50,140 --> 00:44:47,960
thanks for your question one of our

1131
00:44:52,180 --> 00:44:50,150
followers how will this Agreement make a

1132
00:44:55,599 --> 00:44:52,190
difference to third world countries like

1133
00:44:59,200 --> 00:44:55,609
Ethiopia ah well all I can I'll give you

1134
00:45:03,250 --> 00:44:59,210
an example for you know when we were in

1135
00:45:05,049 --> 00:45:03,260
Nairobi Kenya with severe it's a probe

1136
00:45:07,210 --> 00:45:05,059
it's an ongoing program between our two

1137
00:45:09,490 --> 00:45:07,220
agencies what we're doing today is

1138
00:45:11,740 --> 00:45:09,500

expanding the work that we do to include

1139
00:45:14,650 --> 00:45:11,750
more education more science initiative

1140
00:45:17,920 --> 00:45:14,660
so a company a country like Ethiopia

1141
00:45:21,849 --> 00:45:17,930
will be touched and in fact dan I got to

1142
00:45:23,950 --> 00:45:21,859
ask you is Ethiopia one of the 15 I

1143
00:45:25,690 --> 00:45:23,960
think it's one of the 15 East African

1144
00:45:28,359 --> 00:45:25,700
nations that is already a part of the

1145
00:45:30,910 --> 00:45:28,369
severe out of Nairobi and as I mentioned

1146
00:45:33,670 --> 00:45:30,920
you know these are countries that are

1147
00:45:35,620 --> 00:45:33,680
stricken by alternately droughts and

1148
00:45:37,930 --> 00:45:35,630
floods but nobody ever put them together

1149
00:45:39,849 --> 00:45:37,940
before and when we were there this past

1150
00:45:41,819 --> 00:45:39,859
year they were actually helping them to

1151
00:45:44,049 --> 00:45:41,829
build drought and flood models so that

1152
00:45:46,599 --> 00:45:44,059
you know they could help to to

1153
00:45:48,640 --> 00:45:46,609
counteract the impact of both those

1154
00:45:55,539 --> 00:45:48,650
those tragedies in those particular

1155
00:45:58,030 --> 00:45:55,549
areas yeah hello my question is was

1156
00:46:00,160 --> 00:45:58,040
severe and will this information be

1157
00:46:04,359 --> 00:46:00,170
publicly available to those who would

1158
00:46:08,440 --> 00:46:04,369
like to use it for science Kerry you

1159
00:46:09,819 --> 00:46:08,450
were Dan yes the information all the

1160
00:46:13,359 --> 00:46:09,829
products that we create are publicly

1161
00:46:15,520 --> 00:46:13,369
available the data sets are available as

1162
00:46:18,280 --> 00:46:15,530
well as the dry product so that's

1163
00:46:20,049 --> 00:46:18,290

something that is very important so not

1164
00:46:21,339 --> 00:46:20,059
only the initial users can take

1165
00:46:25,539 --> 00:46:21,349
advantage of them but the science and

1166
00:46:27,359 --> 00:46:25,549
research community can as well I think

1167
00:46:30,609 --> 00:46:27,369
we have another okay go ahead over here

1168
00:46:34,829 --> 00:46:30,619
yes I want to follow up on the previous

1169
00:46:38,230 --> 00:46:34,839
question often universities in the US

1170
00:46:41,200 --> 00:46:38,240
when we want to work with kind of parts

1171
00:46:43,359 --> 00:46:41,210
the development world they in Africa we

1172
00:46:46,810 --> 00:46:43,369
have difficulty getting support for them

1173
00:46:48,730 --> 00:46:46,820
not for us because every time we go we

1174
00:46:51,700 --> 00:46:48,740
are told that you must go to the USAID

1175
00:46:55,210 --> 00:46:51,710
mission and frankly it is not feasible

1176
00:46:58,240 --> 00:46:55,220
for us to go for every project good a

1177
00:47:00,550 --> 00:46:58,250
mission in Tanzania Kenya and so on and

1178
00:47:03,460 --> 00:47:00,560
so on and frankly that has been the

1179
00:47:05,859 --> 00:47:03,470
biggest single barrier towards their

1180
00:47:07,600 --> 00:47:05,869
partnership with our counterparts you

1181
00:47:09,490 --> 00:47:07,610
know in the development world do you

1182
00:47:12,760 --> 00:47:09,500
have any specific way of addressing that

1183
00:47:14,440 --> 00:47:12,770
problem yes so let me let me suggest two

1184
00:47:16,270 --> 00:47:14,450
or three one is we launched a program

1185
00:47:18,370 --> 00:47:16,280
under this administration called feed

1186
00:47:21,550 --> 00:47:18,380
the future of which I know you're aware

1187
00:47:23,800 --> 00:47:21,560
to help address global hunger and food

1188
00:47:25,870 --> 00:47:23,810

insecurity and a lot of that is by

1189
00:47:28,150 --> 00:47:25,880
supporting the training of agricultural

1190
00:47:30,510 --> 00:47:28,160
scientists figuring out how to use

1191
00:47:33,520 --> 00:47:30,520
mobile phones to get market pricing for

1192
00:47:35,980 --> 00:47:33,530
crops so that farmers can negotiate

1193
00:47:37,380 --> 00:47:35,990
better deals with middlemen and a range

1194
00:47:40,210 --> 00:47:37,390
of other things knowing how to interpret

1195
00:47:43,150 --> 00:47:40,220
severe data in Ethiopia so that you can

1196
00:47:44,770 --> 00:47:43,160
identify what likely drought patterns

1197
00:47:46,530 --> 00:47:44,780
might mean for food production and

1198
00:47:48,940 --> 00:47:46,540
market prices and respond accordingly

1199
00:47:50,170 --> 00:47:48,950
those programs that we've through that

1200
00:47:52,120 --> 00:47:50,180
we've rolled out hundreds of additional

1201
00:47:54,130 --> 00:47:52,130
fellowships through programs like the

1202
00:47:56,830 --> 00:47:54,140
award program with the an organization

1203
00:47:59,560 --> 00:47:56,840
called the cgiar and with other direct

1204
00:48:01,420 --> 00:47:59,570
programs with us universities so it's a

1205
00:48:04,750 --> 00:48:01,430
it's a major priority and I was glad to

1206
00:48:06,250 --> 00:48:04,760
see even in severe itself a component of

1207
00:48:09,609 --> 00:48:06,260
that program being used to build

1208
00:48:11,200 --> 00:48:09,619
capacity in institutions in sub-saharan

1209
00:48:13,120 --> 00:48:11,210
Africa and South Asia and around the

1210
00:48:15,910 --> 00:48:13,130
world because at the end of the day and

1211
00:48:17,500 --> 00:48:15,920
this we've seen this before when USA and

1212
00:48:20,650 --> 00:48:17,510
other partners got together and help

1213
00:48:24,160 --> 00:48:20,660

support the Green Revolution decades ago

1214
00:48:27,190 --> 00:48:24,170
to deal with hunger and in South Asia a

1215
00:48:30,070 --> 00:48:27,200
big part of the legacy we left were

1216
00:48:32,920 --> 00:48:30,080
thousands of agricultural scientists and

1217
00:48:35,170 --> 00:48:32,930
trained scientists and professors at

1218
00:48:36,790 --> 00:48:35,180
universities and researchers and that's

1219
00:48:38,140 --> 00:48:36,800
very much what we're trying to do so

1220
00:48:42,820 --> 00:48:38,150
we've dramatically expanded those

1221
00:48:46,660 --> 00:48:42,830
programs okay okay a little thick

1222
00:48:48,520 --> 00:48:46,670
um I had a question um with USAID arm I

1223
00:48:51,970 --> 00:48:48,530
know how you all were speaking on

1224
00:48:53,860 --> 00:48:51,980
countries like Ethiopia in Africa um do

1225
00:48:55,660 --> 00:48:53,870
you also help countries that are

1226
00:48:57,160 --> 00:48:55,670
slightly more developed even become more

1227
00:49:00,310 --> 00:48:57,170
developed like countries like nigeria

1228
00:49:03,670 --> 00:49:00,320
and south africa who are slightly more

1229
00:49:05,140 --> 00:49:03,680
developed than ethiopia but but not as

1230
00:49:07,900 --> 00:49:05,150
developed as America like do y'all help

1231
00:49:09,940 --> 00:49:07,910
countries like those also you know we do

1232
00:49:12,580 --> 00:49:09,950
we have programs and through launch and

1233
00:49:14,440 --> 00:49:12,590
severe and through the full range of our

1234
00:49:16,420 --> 00:49:14,450
work we work in more than a hundred

1235
00:49:17,980 --> 00:49:16,430
countries around the world you know

1236
00:49:21,280 --> 00:49:17,990
frankly in countries that have more

1237
00:49:23,380 --> 00:49:21,290
local resources we also ask countries to

1238
00:49:25,660 --> 00:49:23,390

expand their own investments in these

1239
00:49:27,640 --> 00:49:25,670
types of efforts so a lot of times our

1240
00:49:29,830 --> 00:49:27,650
resources are matching with increased

1241
00:49:31,210 --> 00:49:29,840
country commitments and we do that

1242
00:49:33,430 --> 00:49:31,220
because we know we get better results

1243
00:49:36,970 --> 00:49:33,440
that way and there's more accountability

1244
00:49:38,920 --> 00:49:36,980
on both sides so you know results in

1245
00:49:41,740 --> 00:49:38,930
accountability or a major focus for our

1246
00:49:43,630 --> 00:49:41,750
reform efforts at US aid so we are

1247
00:49:46,300 --> 00:49:43,640
pursuing that but with a real sense of

1248
00:49:47,800 --> 00:49:46,310
mutual commitment okay we have time for

1249
00:49:50,890 --> 00:49:47,810
two more questions we'll take the 10

1250
00:49:54,460 --> 00:49:50,900
line mill first one of our Twitter

1251
00:49:58,000 --> 00:49:54,470
followers in Edinburgh UK how are you

1252
00:50:02,010 --> 00:49:58,010
working with India on your programs and

1253
00:50:04,510 --> 00:50:02,020
with the indian space program we have a

1254
00:50:06,400 --> 00:50:04,520
an umbrella agreement with the Indian

1255
00:50:08,530 --> 00:50:06,410
Space Agency and i will tell you an

1256
00:50:12,370 --> 00:50:08,540
interesting story they had a tremendous

1257
00:50:14,710 --> 00:50:12,380
increase in funding this in 2010 when

1258
00:50:17,020 --> 00:50:14,720
I've had my first meeting with the the

1259
00:50:21,220 --> 00:50:17,030
Indian Minister of the Indian Space

1260
00:50:23,680 --> 00:50:21,230
Agency he said they were spending 75% of

1261
00:50:25,750 --> 00:50:23,690
all of their funding on what they call

1262
00:50:28,240 --> 00:50:25,760
society meeting societal needs the type

1263
00:50:30,520 --> 00:50:28,250

of work that USAID and NASA are doing

1264
00:50:33,250 --> 00:50:30,530
together while still intending to

1265
00:50:35,560 --> 00:50:33,260
develop a human spaceflight program so

1266
00:50:38,170 --> 00:50:35,570
nASA has a number of science agreements

1267
00:50:40,210 --> 00:50:38,180
with with India under the umbrella

1268
00:50:43,360 --> 00:50:40,220
agreement and I'm certain that USAID

1269
00:50:44,890 --> 00:50:43,370
does something very similar we do we do

1270
00:50:46,840 --> 00:50:44,900
absolutely and in fact during the

1271
00:50:49,000 --> 00:50:46,850
president's visit just a few months ago

1272
00:50:51,520 --> 00:50:49,010
to India we launched a series of

1273
00:50:54,040 --> 00:50:51,530
programs that range from agriculture to

1274
00:50:56,230 --> 00:50:54,050
education to helping

1275
00:50:57,640 --> 00:50:56,240
Unity's improve their governance and

1276
00:51:00,430 --> 00:50:57,650
their transparency all of which

1277
00:51:02,350 --> 00:51:00,440
leveraged technology and technology that

1278
00:51:04,750 --> 00:51:02,360
was designed to be incredibly affordable

1279
00:51:07,180 --> 00:51:04,760
and accessible very broadly to the

1280
00:51:09,700 --> 00:51:07,190
hundreds of millions of rural its

1281
00:51:11,290 --> 00:51:09,710
Indians that live there so that's a

1282
00:51:13,380 --> 00:51:11,300
great question and thank you before we

1283
00:51:16,000 --> 00:51:13,390
go to the last question me make a plea

1284
00:51:19,420 --> 00:51:16,010
because we constantly hear people talk

1285
00:51:23,050 --> 00:51:19,430
about you know NASA's work in in earth

1286
00:51:24,850 --> 00:51:23,060
science if you will but you have to

1287
00:51:27,940 --> 00:51:24,860
remember when Dan discovered the stuff

1288
00:51:31,090 --> 00:51:27,950

at the beginning of the severe program

1289
00:51:35,200 --> 00:51:31,100
he had the benefit of looking back at 30

1290
00:51:37,420 --> 00:51:35,210
years of earth science data that had

1291
00:51:39,190 --> 00:51:37,430
been archived and it's stuff that we

1292
00:51:41,980 --> 00:51:39,200
never I don't think anybody ever

1293
00:51:44,140 --> 00:51:41,990
envisioned that NASA earth science data

1294
00:51:47,050 --> 00:51:44,150
data provided by satellites and what we

1295
00:51:49,090 --> 00:51:47,060
call the a train would ever be put to

1296
00:51:50,170 --> 00:51:49,100
this type of youth so what's really

1297
00:51:53,410 --> 00:51:50,180
important and I would say to the

1298
00:51:58,260 --> 00:51:53,420
students back there you know just as

1299
00:52:00,460 --> 00:51:58,270
josh is done and go back to school ok

1300
00:52:01,840 --> 00:52:00,470
that's necessarily I'll tell you you

1301
00:52:05,620 --> 00:52:01,850
don't have to i mean you could be like

1302
00:52:07,690 --> 00:52:05,630
these rich guys but go back but but

1303
00:52:09,730 --> 00:52:07,700
think about the things that you can do

1304
00:52:12,100 --> 00:52:09,740
to make a difference in the world and

1305
00:52:14,140 --> 00:52:12,110
you know there's an incredible amount of

1306
00:52:16,390 --> 00:52:14,150
information that's available to help you

1307
00:52:18,130 --> 00:52:16,400
make that difference we have no idea

1308
00:52:20,290 --> 00:52:18,140
what's going to happen with the data

1309
00:52:21,940 --> 00:52:20,300
that we accumulate over time so i would

1310
00:52:23,290 --> 00:52:21,950
encourage you to you know come check

1311
00:52:24,760 --> 00:52:23,300
with our two agencies and see if there's

1312
00:52:26,500 --> 00:52:24,770
something you can do you say there's one

1313
00:52:30,760 --> 00:52:26,510

more i thought i saw millions were more

1314
00:52:33,610 --> 00:52:30,770
two more i think there's one way back

1315
00:52:35,350 --> 00:52:33,620
there good afternoon my name is Marcelo

1316
00:52:36,400 --> 00:52:35,360
sell mary oh i'm a freshman chemical

1317
00:52:40,870 --> 00:52:36,410
engineering major at howard university

1318
00:52:45,000 --> 00:52:40,880
and my question is both agencies have

1319
00:52:48,100 --> 00:52:45,010
stressed students as the next wave of

1320
00:52:51,310 --> 00:52:48,110
operations so my question is what kind

1321
00:52:53,340 --> 00:52:51,320
of new programs new initiatives in both

1322
00:52:57,010 --> 00:52:53,350
agencies will be available for

1323
00:52:59,470 --> 00:52:57,020
specifically under graduates to help in

1324
00:53:00,880 --> 00:52:59,480
both agencies missions I know nASA has a

1325
00:53:03,880 --> 00:53:00,890
lot of internships currently available

1326
00:53:05,860 --> 00:53:03,890
now but what kind of new programs with

1327
00:53:07,920 --> 00:53:05,870
this partnership will be created to help

1328
00:53:11,260 --> 00:53:07,930
undergraduates real

1329
00:53:14,950 --> 00:53:11,270
be a factor in fulfilling the 2h these

1330
00:53:16,600 --> 00:53:14,960
missions because you stumped me well you

1331
00:53:19,600 --> 00:53:16,610
know I'm glad you asked that we actually

1332
00:53:21,040 --> 00:53:19,610
will this fall be launching at a series

1333
00:53:22,900 --> 00:53:21,050
of very targeted programs for

1334
00:53:25,540 --> 00:53:22,910
undergraduates in particular I think the

1335
00:53:27,070 --> 00:53:25,550
truth is until quite recently there's

1336
00:53:28,480 --> 00:53:27,080
been a sense that well you know you

1337
00:53:32,290 --> 00:53:28,490
should be a graduate student or a

1338
00:53:34,540 --> 00:53:32,300

postgraduate PhD and then you can learn

1339
00:53:36,400 --> 00:53:34,550
this field and spend maybe 10 or 15

1340
00:53:38,500 --> 00:53:36,410
years really learning the field and then

1341
00:53:41,200 --> 00:53:38,510
you start contributing and developing

1342
00:53:43,780 --> 00:53:41,210
solutions I think it's josh is just sort

1343
00:53:46,090 --> 00:53:43,790
of a personal embodiment of something of

1344
00:53:47,620 --> 00:53:46,100
the counterfactual that you know that

1345
00:53:49,780 --> 00:53:47,630
undergraduates have a huge amount to

1346
00:53:51,580 --> 00:53:49,790
offer and the reason i talked about MIT

1347
00:53:53,380 --> 00:53:51,590
in particular those were undergraduate

1348
00:53:55,960 --> 00:53:53,390
students and it's happening on college

1349
00:53:58,120 --> 00:53:55,970
campuses everywhere i go classes and

1350
00:53:59,830 --> 00:53:58,130
global development global health these

1351
00:54:01,810 --> 00:53:59,840
things are oversubscribed people are

1352
00:54:04,450 --> 00:54:01,820
sitting in the aisles standing in the

1353
00:54:06,520 --> 00:54:04,460
back and we want to create opportunities

1354
00:54:08,560 --> 00:54:06,530
for undergraduate students to really

1355
00:54:11,710 --> 00:54:08,570
figure out how can you be creative and

1356
00:54:13,900 --> 00:54:11,720
use the skills insights technology and

1357
00:54:16,180 --> 00:54:13,910
sense of confidence that you bring that

1358
00:54:18,370 --> 00:54:16,190
these are solvable problems that we can

1359
00:54:22,030 --> 00:54:18,380
develop business models or tools like

1360
00:54:23,680 --> 00:54:22,040
mobile medic or use geospatial data to

1361
00:54:25,180 --> 00:54:23,690
really help people see things a

1362
00:54:27,790 --> 00:54:25,190
different way and change the way they

1363
00:54:29,110 --> 00:54:27,800

think and you don't have to wait you can

1364
00:54:30,280 --> 00:54:29,120
do that as an undergrad and we're gonna

1365
00:54:32,920 --> 00:54:30,290
have a series of programs to support

1366
00:54:34,450 --> 00:54:32,930
that so we're working on that and we'll

1367
00:54:37,150 --> 00:54:34,460
get back to you in the fall but but

1368
00:54:39,610 --> 00:54:37,160
please do look at our website usa.gov

1369
00:54:41,350 --> 00:54:39,620
for more information about that and we

1370
00:54:42,730 --> 00:54:41,360
have a science and technology tag there

1371
00:54:45,030 --> 00:54:42,740
you can click on that there'll be more

1372
00:54:48,850 --> 00:54:45,040
right there but thanks for that question

1373
00:54:50,590 --> 00:54:48,860
so we're quick to the top hello I'm a

1374
00:54:53,230 --> 00:54:50,600
UCLA student i'm working at the State

1375
00:54:55,000 --> 00:54:53,240
Department I have a question about women

1376
00:54:57,160 --> 00:54:55,010
in science and science women in science

1377
00:54:58,600 --> 00:54:57,170
and technology how are you encouraging

1378
00:55:01,060 --> 00:54:58,610
women and girls in the developing world

1379
00:55:04,600 --> 00:55:01,070
to pursue more careers in science and

1380
00:55:06,820 --> 00:55:04,610
technology I I wish we had Rebecca spike

1381
00:55:09,310 --> 00:55:06,830
Kaiser here who we're very active with

1382
00:55:12,310 --> 00:55:09,320
the first lady's with actually with the

1383
00:55:13,840 --> 00:55:12,320
White House is an initiative on women in

1384
00:55:17,710 --> 00:55:13,850
science and engineering as I'm certain

1385
00:55:19,950 --> 00:55:17,720
USAID is but we we actually if you go to

1386
00:55:22,800 --> 00:55:19,960
the NASA website there is a huge fee

1387
00:55:24,599 --> 00:55:22,810
on women at NASA and I think it will

1388
00:55:27,000 --> 00:55:24,609

give you some insight into the types of

1389
00:55:29,190 --> 00:55:27,010
programs that that are that our

1390
00:55:31,710 --> 00:55:29,200
employees are engaged in I would

1391
00:55:33,810 --> 00:55:31,720
encourage you to try to find some of the

1392
00:55:36,450 --> 00:55:33,820
young ladies who are here and young is a

1393
00:55:38,820 --> 00:55:36,460
relative term okay I always get

1394
00:55:42,329 --> 00:55:38,830
complaints when I use that word hi I'm

1395
00:55:44,430 --> 00:55:42,339
64 years young so I am a young person

1396
00:55:46,859 --> 00:55:44,440
you're as young as you are in here but

1397
00:55:49,170 --> 00:55:46,869
as you get ready to leave here I'd

1398
00:55:50,700 --> 00:55:49,180
invite you to talk to any of the women

1399
00:55:53,220 --> 00:55:50,710
that you see here who may happen to be

1400
00:55:55,320 --> 00:55:53,230
working for either NASA or USAID and

1401
00:55:57,870 --> 00:55:55,330
have them tell you what it is that they

1402
00:55:59,730 --> 00:55:57,880
do but go to the NASA website for one

1403
00:56:01,220 --> 00:55:59,740
and look at women in NASA and I think

1404
00:56:03,180 --> 00:56:01,230
you'll find it pretty interesting

1405
00:56:11,760 --> 00:56:03,190
alright with that let's think the

1406
00:56:15,079 --> 00:56:11,770
administrators for their time okay so

1407
00:56:17,690 --> 00:56:15,089
next I like to introduce dr. Alex bagan

1408
00:56:21,570 --> 00:56:17,700
dr. Dagan is the science and technology

1409
00:56:23,640 --> 00:56:21,580
you can you sit back here sorry about

1410
00:56:25,859 --> 00:56:23,650
the doctor Dagan is the science and

1411
00:56:28,140 --> 00:56:25,869
technology advisor to the administrator

1412
00:56:29,700 --> 00:56:28,150
of USAID in heads the office of science

1413
00:56:33,390 --> 00:56:29,710

and technology within the new Bureau of

1414
00:56:35,820 --> 00:56:33,400
policy planning and learning as the S&T

1415
00:56:37,920 --> 00:56:35,830
advisor dr. Dagan serves as the key

1416
00:56:39,690 --> 00:56:37,930
focal point for implementing the

1417
00:56:41,510 --> 00:56:39,700
administrators vision to restore science

1418
00:56:46,109 --> 00:56:41,520
and technology to its rightful place

1419
00:56:48,800 --> 00:56:46,119
within USAID and ensure that USAID is

1420
00:56:51,870 --> 00:56:48,810
the global leader on employing science

1421
00:56:54,089 --> 00:56:51,880
technology and creativity to help solve

1422
00:56:57,030 --> 00:56:54,099
traditional and persistent development

1423
00:56:58,440 --> 00:56:57,040
challenges in novel ways he has a PhD in

1424
00:57:01,380 --> 00:56:58,450
master's degree from the University of

1425
00:57:03,150 --> 00:57:01,390
Chicago a law degree from the University

1426
00:57:05,849 --> 00:57:03,160
of California and the bachelor of

1427
00:57:08,970 --> 00:57:05,859
science degree from Duke University well

1428
00:57:11,400 --> 00:57:08,980
a lot of degrees there he is chosen

1429
00:57:13,710 --> 00:57:11,410
taught to do trick in a minute he is it

1430
00:57:16,230 --> 00:57:13,720
was chosen as an icon of science by seed

1431
00:57:17,970 --> 00:57:16,240
magazine in 2005 and if received

1432
00:57:20,339 --> 00:57:17,980
international recognition for his

1433
00:57:30,980 --> 00:57:20,349
research and professional work please

1434
00:57:36,600 --> 00:57:34,530
man what an impressive day when one of

1435
00:57:39,150 --> 00:57:36,610
the things that that that overly long

1436
00:57:41,010 --> 00:57:39,160
intro on my bio probably didn't mention

1437
00:57:43,800 --> 00:57:41,020
is the fact that I benefited from so

1438
00:57:46,110 --> 00:57:43,810

many years of NASA data in terms of

1439
00:57:48,540 --> 00:57:46,120
Landsat data and modis data and other

1440
00:57:50,310 --> 00:57:48,550
imagery in terms of getting my own PhD

1441
00:57:52,290 --> 00:57:50,320
done so thank you very much for all the

1442
00:57:54,270 --> 00:57:52,300
work that's gone into that I remember

1443
00:57:56,010 --> 00:57:54,280
meeting woody Turner across a foosball

1444
00:57:57,990 --> 00:57:56,020
table in England at a scientific

1445
00:58:01,230 --> 00:57:58,000
conference and finding out how much NASA

1446
00:58:03,390 --> 00:58:01,240
does for researchers it's it's clear

1447
00:58:05,880 --> 00:58:03,400
that NASA and USAID both do things that

1448
00:58:07,950 --> 00:58:05,890
involve large additions goals they take

1449
00:58:10,470 --> 00:58:07,960
on the grand challenges of our lifetimes

1450
00:58:12,120 --> 00:58:10,480
they put humans into space connect the

1451
00:58:15,090 --> 00:58:12,130
world to knowledge harvest and store

1452
00:58:17,010 --> 00:58:15,100
energy from the Sun both agencies carry

1453
00:58:19,890 --> 00:58:17,020
out vital missions for American people

1454
00:58:21,570 --> 00:58:19,900
and protecting American homelands NASA

1455
00:58:23,340 --> 00:58:21,580
creates technologies and innovations

1456
00:58:25,560 --> 00:58:23,350
that keep Americans alive in the most

1457
00:58:26,970 --> 00:58:25,570
extreme environments but we can apply

1458
00:58:28,770 --> 00:58:26,980
those insights and those breakthroughs

1459
00:58:30,600 --> 00:58:28,780
to solve some of the most challenging

1460
00:58:33,090 --> 00:58:30,610
problems at home in the developing world

1461
00:58:34,890 --> 00:58:33,100
and when NASA's technology is leveraged

1462
00:58:37,710 --> 00:58:34,900
against the deep international

1463
00:58:40,530 --> 00:58:37,720

development expertise USAID we can do

1464
00:58:42,390 --> 00:58:40,540
truly powerful and unprecedented things

1465
00:58:44,400 --> 00:58:42,400
we look forward to many more

1466
00:58:47,010 --> 00:58:44,410
accomplishments that match or suppressed

1467
00:58:48,930 --> 00:58:47,020
achievements of severe and launch in the

1468
00:58:51,930 --> 00:58:48,940
coming years and as President Obama

1469
00:58:54,300 --> 00:58:51,940
noted we are at a Sputnik moment we face

1470
00:58:56,460 --> 00:58:54,310
new global challenges and the solutions

1471
00:58:59,040 --> 00:58:56,470
to them are actually held by you the

1472
00:59:00,740 --> 00:58:59,050
students the next generation and your

1473
00:59:03,780 --> 00:59:00,750
counterparts in the developing world

1474
00:59:07,160 --> 00:59:03,790
it's pretty clear that that despite the

1475
00:59:09,720 --> 00:59:07,170
great brains exist within NASA and USAID

1476
00:59:11,100 --> 00:59:09,730
all the solutions to critical

1477
00:59:12,540 --> 00:59:11,110
development challenges will not come

1478
00:59:14,640 --> 00:59:12,550
within the four walls of this

1479
00:59:17,370 --> 00:59:14,650
institution or over at the ronald reagan

1480
00:59:18,600 --> 00:59:17,380
building administrator Shahs remarks and

1481
00:59:20,040 --> 00:59:18,610
our experiences as development

1482
00:59:21,840 --> 00:59:20,050
professionals have shown that some of

1483
00:59:23,730 --> 00:59:21,850
the most vital leading-edge work and

1484
00:59:25,710 --> 00:59:23,740
development is done in university labs

1485
00:59:28,440 --> 00:59:25,720
and research centers we believe that

1486
00:59:31,080 --> 00:59:28,450
places like MIT zhdi lab the design

1487
00:59:33,480 --> 00:59:31,090
school at Stanford NGOs like Palo Alto

1488
00:59:35,490 --> 00:59:33,490

design revolution and the global social

1489
00:59:37,560 --> 00:59:35,500
benefit in incubator at Santa Clara

1490
00:59:38,970 --> 00:59:37,570
University and countless others

1491
00:59:41,040 --> 00:59:38,980
are the engines of the most crucial

1492
00:59:43,340 --> 00:59:41,050
thinking and advances in international

1493
00:59:45,600 --> 00:59:43,350
development they advance an ethic of

1494
00:59:47,520 --> 00:59:45,610
multidisciplinary collaboration of

1495
00:59:49,410 --> 00:59:47,530
direct partnership with the developing

1496
00:59:52,200 --> 00:59:49,420
world and what's really interesting it

1497
00:59:53,580 --> 00:59:52,210
is student demand that is driving the

1498
00:59:56,400 --> 00:59:53,590
changes that we see across our

1499
00:59:58,050 --> 00:59:56,410
university campuses higher education is

1500
01:00:00,210 --> 00:59:58,060
also an unparalleled engine of

1501
01:00:01,950 --> 01:00:00,220
opportunity in the developing world as

1502
01:00:05,220 --> 01:00:01,960
well as it is within the United States

1503
01:00:06,840 --> 01:00:05,230
and USAID is working hard at better

1504
01:00:08,730 --> 01:00:06,850
leveraging the power of university

1505
01:00:10,470 --> 01:00:08,740
capabilities in science and technology

1506
01:00:13,680 --> 01:00:10,480
for the for development through new

1507
01:00:16,140 --> 01:00:13,690
partnerships that are underway the

1508
01:00:19,050 --> 01:00:16,150
students you are part of this picture it

1509
01:00:20,670 --> 01:00:19,060
isn't so impressive to see how Josh and

1510
01:00:23,940 --> 01:00:20,680
Dietrich of metric mobile have shown you

1511
01:00:26,220 --> 01:00:23,950
today what can be achieved a small team

1512
01:00:28,590 --> 01:00:26,230
of students that started up metric medic

1513
01:00:30,210 --> 01:00:28,600

mobile from scratch operating on a lean

1514
01:00:32,310 --> 01:00:30,220
budget they have accomplished so much

1515
01:00:35,940 --> 01:00:32,320
and they have so much more potential to

1516
01:00:37,800 --> 01:00:35,950
do that but no matter what your academic

1517
01:00:39,750 --> 01:00:37,810
discipline is or was i encourage you to

1518
01:00:42,720 --> 01:00:39,760
stretch your horizons a bit more our

1519
01:00:44,610 --> 01:00:42,730
most vexing challenges in international

1520
01:00:47,400 --> 01:00:44,620
development require solutions from

1521
01:00:49,530 --> 01:00:47,410
creative multidisciplinary thinkers that

1522
01:00:51,000 --> 01:00:49,540
means aspiring entrepreneurs and

1523
01:00:52,980 --> 01:00:51,010
economist should probably know a little

1524
01:00:55,050 --> 01:00:52,990
bit more about water infectious diseases

1525
01:00:56,400 --> 01:00:55,060
and environment while mechanical

1526
01:00:58,560 --> 01:00:56,410
engineers might want to delve into

1527
01:01:02,010 --> 01:00:58,570
economics design or anthropology more

1528
01:01:03,570 --> 01:01:02,020
deeply I'm sure the audience in this

1529
01:01:05,130 --> 01:01:03,580
room has heard this quote many times

1530
01:01:06,780 --> 01:01:05,140
longer repeat it because it's really

1531
01:01:08,820 --> 01:01:06,790
applicable to what we're doing in the

1532
01:01:10,280 --> 01:01:08,830
developing world as President Kennedy

1533
01:01:12,600 --> 01:01:10,290
said in his address at Rice University

1534
01:01:14,160 --> 01:01:12,610
we chose to go to the moon in this

1535
01:01:15,930 --> 01:01:14,170
decade and not to do other things not

1536
01:01:18,060 --> 01:01:15,940
because they are easy but because they

1537
01:01:19,740 --> 01:01:18,070
are hard because that goal will serve to

1538
01:01:21,600 --> 01:01:19,750

organize and measure the best of our

1539
01:01:24,030 --> 01:01:21,610
energy and skills because that challenge

1540
01:01:25,860 --> 01:01:24,040
is one we're willing to accept one we're

1541
01:01:28,400 --> 01:01:25,870
willing to postpone and one that we

1542
01:01:31,260 --> 01:01:28,410
intend to wind in others to this

1543
01:01:33,540 --> 01:01:31,270
administration and these administrators

1544
01:01:35,300 --> 01:01:33,550
have chosen to also take on some of the

1545
01:01:37,800 --> 01:01:35,310
hardest challenges in the world in

1546
01:01:40,650 --> 01:01:37,810
development they have chosen to be bold

1547
01:01:42,690 --> 01:01:40,660
they have chosen to do big things and to

1548
01:01:45,060 --> 01:01:42,700
paraphrase President Kennedy again it

1549
01:01:46,680 --> 01:01:45,070
will not be one man that will be doing

1550
01:01:48,990 --> 01:01:46,690
these challenges but it'll be an entire

1551
01:01:51,030 --> 01:01:49,000
nation for all of us must work to put

1552
01:01:51,420 --> 01:01:51,040
them there the same applies to the goals

1553
01:01:53,970 --> 01:01:51,430
we do

1554
01:01:55,650 --> 01:01:53,980
just this day with that I invite our two

1555
01:02:41,639 --> 01:01:55,660
esteemed administrators to retake the