



1
00:00:06,389 --> 00:00:02,629
station this is houston are you ready

2
00:00:12,950 --> 00:00:08,070
houston the international space station

3
00:00:17,670 --> 00:00:15,110
bank of canada this is mission control

4
00:00:21,830 --> 00:00:17,680
houston please call station for a voice

5
00:00:26,710 --> 00:00:23,910
station this is a jim flaherty minister

6
00:00:31,750 --> 00:00:26,720
of finance here at the bank of canada

7
00:00:47,430 --> 00:00:34,470
minister flaherty i read you uh loud and

8
00:00:50,630 --> 00:00:49,510
governor and uh distinguished guests it

9
00:00:52,310 --> 00:00:50,640
is my

10
00:00:55,110 --> 00:00:52,320
pleasure and honor to introduce you to

11
00:00:56,470 --> 00:00:55,120
the first canadian to operate the canada

12
00:00:58,709 --> 00:00:56,480
arm in orbit

13
00:01:00,150 --> 00:00:58,719

the first canadian to leave a spacecraft

14

00:01:01,750 --> 00:01:00,160

and walk in space

15

00:01:04,070 --> 00:01:01,760

and the first canadian to command the

16

00:01:05,590 --> 00:01:04,080

international space station commander

17

00:01:07,270 --> 00:01:05,600

chris hadfield

18

00:01:09,830 --> 00:01:07,280

commander thank you for joining us and

19

00:01:15,270 --> 00:01:09,840

thank you for helping us unveil the new

20

00:01:19,830 --> 00:01:17,030

well thank you very much minister

21

00:01:21,830 --> 00:01:19,840

flaherty and uh governor carney as well

22

00:01:23,670 --> 00:01:21,840

and uh welcome on board to the

23

00:01:25,270 --> 00:01:23,680

international space station

24

00:01:26,950 --> 00:01:25,280

for the past

25

00:01:28,630 --> 00:01:26,960

gosh almost five months it's been my

26

00:01:30,789 --> 00:01:28,640

home away from earth

27

00:01:32,469 --> 00:01:30,799

i'm just feel so incredibly privileged

28

00:01:33,670 --> 00:01:32,479

to be able to have seen

29

00:01:35,429 --> 00:01:33,680

canada

30

00:01:36,710 --> 00:01:35,439

and the world the way you can from here

31

00:01:38,870 --> 00:01:36,720

and from orbit

32

00:01:41,190 --> 00:01:38,880

it's really clear that

33

00:01:43,109 --> 00:01:41,200

canada's internal accomplishments have

34

00:01:45,670 --> 00:01:43,119

reached well beyond our

35

00:01:48,230 --> 00:01:45,680

our extensive frontiers

36

00:01:50,069 --> 00:01:48,240

and these new polymer notes

37

00:01:51,670 --> 00:01:50,079

show us the the type of thing that we

38

00:01:53,990 --> 00:01:51,680

can accomplish when we really put our

39

00:01:56,709 --> 00:01:54,000

minds to it and let me show you an

40

00:02:04,389 --> 00:01:56,719

example of how we can reach new heights

41

00:02:04,399 --> 00:02:20,229

the participants

42

00:02:20,239 --> 00:02:27,430

me

43

00:02:30,869 --> 00:02:29,190

so you can hear us

44

00:02:33,190 --> 00:02:30,879

but unfortunately you don't have video

45

00:02:35,270 --> 00:02:33,200

so you can't see us and that's a shame

46

00:02:37,270 --> 00:02:35,280

because we have someone here today

47

00:02:40,309 --> 00:02:37,280

who i know you would like to see very

48

00:02:42,550 --> 00:02:40,319

much among our very distinguished guests

49

00:02:53,030 --> 00:02:42,560

there's one very special indeed mrs

50

00:02:55,030 --> 00:02:54,229

hi elena

51

00:02:56,710 --> 00:02:55,040

uh

52

00:02:58,869 --> 00:02:56,720

and thanks very much for being there to

53

00:03:00,390 --> 00:02:58,879

represent me of course but to represent

54

00:03:01,589 --> 00:03:00,400

the whole family

55

00:03:03,750 --> 00:03:01,599

um

56

00:03:05,750 --> 00:03:03,760

and also to all the people that are from

57

00:03:08,070 --> 00:03:05,760

the canadian space agency who really

58

00:03:10,070 --> 00:03:08,080

represent everybody that make this type

59

00:03:11,190 --> 00:03:10,080

of experience for canada to become

60

00:03:13,190 --> 00:03:11,200

possible

61

00:03:14,630 --> 00:03:13,200

uh i just want to tell you

62

00:03:16,710 --> 00:03:14,640

how proud i am

63

00:03:19,030 --> 00:03:16,720

to be able to see canada's achievements

64

00:03:20,790 --> 00:03:19,040

in space highlighted

65

00:03:23,670 --> 00:03:20,800

on on our money

66

00:03:27,030 --> 00:03:23,680

to feature canadarm2 and dext for the

67

00:03:28,869 --> 00:03:27,040

theme of the five dollar note

68

00:03:31,030 --> 00:03:28,879

it really marks canada's contribution

69

00:03:33,670 --> 00:03:31,040

the international space station program

70

00:03:35,990 --> 00:03:33,680

and especially to our long time area of

71

00:03:37,670 --> 00:03:36,000

expertise in robotics

72

00:03:39,910 --> 00:03:37,680

what we call on board which was moving a

73

00:03:42,470 --> 00:03:39,920

little earlier today the canadian mobile

74

00:03:44,630 --> 00:03:42,480

servicing system it's it is the

75

00:03:47,350 --> 00:03:44,640

sophisticated robotics suite that

76

00:03:49,509 --> 00:03:47,360

assembled this place this uh incredible

77

00:03:52,229 --> 00:03:49,519

laboratory here orbiting the earth every

78

00:03:55,350 --> 00:03:52,239

90 minutes and during the past months

79

00:03:57,429 --> 00:03:55,360

in this very laboratory uh our crew in

80

00:03:59,350 --> 00:03:57,439

fact set the all-time record with all of

81

00:04:00,710 --> 00:03:59,360

the support we've had we were able to

82

00:04:02,949 --> 00:04:00,720

set the all-time record for the number

83

00:04:05,030 --> 00:04:02,959

of hours of research performed in space

84

00:04:07,270 --> 00:04:05,040

and there are currently about 130

85

00:04:09,429 --> 00:04:07,280

experiments running on board that are

86

00:04:13,270 --> 00:04:09,439

pushing back the very edge of what is

87

00:04:17,110 --> 00:04:15,589

commander uh can you tell us a bit about

88

00:04:21,670 --> 00:04:17,120

the types of experiments you're

89

00:04:25,909 --> 00:04:23,590

oh sure we got

90

00:04:28,070 --> 00:04:25,919

all sorts of things going on um and in

91

00:04:31,189 --> 00:04:28,080

fact the canadian space agency of course

92

00:04:33,270 --> 00:04:31,199

is is really heavily involved in um in

93

00:04:34,710 --> 00:04:33,280

leading and and developing and helping

94

00:04:36,310 --> 00:04:34,720

to run a lot of the experiments that are

95

00:04:38,870 --> 00:04:36,320

on board something we've been really

96

00:04:40,830 --> 00:04:38,880

focusing on uh from a canadian side of

97

00:04:43,590 --> 00:04:40,840

this multinational laboratory is

98

00:04:44,870 --> 00:04:43,600

healthcare and especially being able to

99

00:04:46,469 --> 00:04:44,880

reach remote communities like this

100

00:04:48,629 --> 00:04:46,479

little one that i live in

101
00:04:49,909 --> 00:04:48,639
for example a canadian experiment that

102
00:04:51,670 --> 00:04:49,919
i've been working on today called

103
00:04:52,870 --> 00:04:51,680
microflow

104
00:04:55,670 --> 00:04:52,880
is

105
00:04:56,950 --> 00:04:55,680
an unprecedented capability it allows us

106
00:04:59,830 --> 00:04:56,960
to

107
00:05:01,350 --> 00:04:59,840
really do a biological sample analysis

108
00:05:03,110 --> 00:05:01,360
in that little box testing for

109
00:05:06,629 --> 00:05:03,120
everything from

110
00:05:08,390 --> 00:05:06,639
infections to cancer markers and

111
00:05:10,469 --> 00:05:08,400
this is especially helpful of course on

112
00:05:12,629 --> 00:05:10,479
board for a long duration space flight

113
00:05:14,310 --> 00:05:12,639

but it's also directly applicable to

114

00:05:16,550 --> 00:05:14,320

people who live in remote parts of the

115

00:05:18,710 --> 00:05:16,560

country and it'll be very helpful for

116

00:05:20,310 --> 00:05:18,720

people in small communities to be able

117

00:05:22,550 --> 00:05:20,320

to monitor their health close to where

118

00:05:24,629 --> 00:05:22,560

they live rather than having to travel

119

00:05:26,230 --> 00:05:24,639

all the way to like a major center for

120

00:05:27,029 --> 00:05:26,240

routine tests

121

00:05:29,029 --> 00:05:27,039

and

122

00:05:31,909 --> 00:05:29,039

conducting other experiments on board

123

00:05:35,110 --> 00:05:31,919

also i've been doing uh cardiovascular

124

00:05:36,550 --> 00:05:35,120

health and the effects of radiation and

125

00:05:39,510 --> 00:05:36,560

i really think

126

00:05:41,670 --> 00:05:39,520

uh that uh banting and best who are

127

00:05:43,749 --> 00:05:41,680

featured on the hundred dollar note

128

00:05:45,430 --> 00:05:43,759

would be delighted to see what canada is

129

00:05:46,790 --> 00:05:45,440

involved in the level of innovation in

130

00:05:48,629 --> 00:05:46,800

our research

131

00:05:49,990 --> 00:05:48,639

and and today in fact the arm was moving

132

00:05:52,550 --> 00:05:50,000

it makes me especially proud to know

133

00:05:54,629 --> 00:05:52,560

that our robots are inventing and

134

00:05:56,870 --> 00:05:54,639

developing technologies with support

135

00:05:59,670 --> 00:05:56,880

from the folks at the agency uh to

136

00:06:02,230 --> 00:05:59,680

refuel failing satellites

137

00:06:03,990 --> 00:06:02,240

and it was only 50 years ago that canada

138

00:06:05,510 --> 00:06:04,000

launched our very first satellite

139

00:06:07,510 --> 00:06:05,520

alouette

140

00:06:09,909 --> 00:06:07,520

in my lifetime we've gone from one small

141

00:06:11,350 --> 00:06:09,919

satellite to commanding a spaceship

142

00:06:13,270 --> 00:06:11,360

and uh

143

00:06:15,510 --> 00:06:13,280

it it's just so much that we've achieved

144

00:06:16,950 --> 00:06:15,520

right from mark garneau of course

145

00:06:19,510 --> 00:06:16,960

through uh all the people are flown

146

00:06:21,430 --> 00:06:19,520

roberta bondar julie payette

147

00:06:23,029 --> 00:06:21,440

robert thirst bob thirsk most recent

148

00:06:24,710 --> 00:06:23,039

person to live up here and the other

149

00:06:25,590 --> 00:06:24,720

members of the canadian space agency

150

00:06:27,110 --> 00:06:25,600

team

151

00:06:28,550 --> 00:06:27,120

and one day of course i think david

152

00:06:31,029 --> 00:06:28,560

saint-jacques is there with you today he

153

00:06:32,629 --> 00:06:31,039

and jeremy hansen will have a chance to

154

00:06:36,390 --> 00:06:32,639

further push back

155

00:06:37,909 --> 00:06:36,400

what is possible for canadians in canada

156

00:06:38,950 --> 00:06:37,919

but you know looking at the bill the

157

00:06:42,150 --> 00:06:38,960

fact that

158

00:06:44,870 --> 00:06:42,160

canadians themselves were involved in

159

00:06:46,710 --> 00:06:44,880

choosing the images that are on this is

160

00:06:48,469 --> 00:06:46,720

really heartwarming to me because i've

161

00:06:51,029 --> 00:06:48,479

been so much in the thick of it these

162

00:06:52,309 --> 00:06:51,039

banknotes will remind canadians every

163

00:06:54,230 --> 00:06:52,319

time they

164

00:06:55,990 --> 00:06:54,240

they buy a sandwich and a coffee and a

165

00:06:58,150 --> 00:06:56,000

doughnut uh

166

00:07:00,070 --> 00:06:58,160

what we are capable of achieving

167

00:07:02,950 --> 00:07:00,080

just looking at it and and the choice

168

00:07:05,589 --> 00:07:02,960

sends a message directly to all future

169

00:07:08,390 --> 00:07:05,599

engineers and and scientists and and

170

00:07:11,670 --> 00:07:08,400

even astronauts uh what is possible when

171

00:07:13,270 --> 00:07:11,680

we work together with dedication and and

172

00:07:17,189 --> 00:07:13,280

collaboration

173

00:07:19,670 --> 00:07:17,199

and canada built canadarm2 and canadarm2

174

00:07:21,589 --> 00:07:19,680

built the international space station

175

00:07:23,589 --> 00:07:21,599

so there are really no limits as

176

00:07:25,270 --> 00:07:23,599

evidenced by what we can accomplish as a

177

00:07:28,550 --> 00:07:25,280

nation when we

178

00:07:29,510 --> 00:07:28,560

work together with a common purpose

179

00:07:31,749 --> 00:07:29,520

so

180

00:07:33,990 --> 00:07:31,759

i want to thank you governor carney and

181

00:07:35,990 --> 00:07:34,000

minister flaherty uh for having me with

182

00:07:37,110 --> 00:07:36,000

you today to help unveil the five dollar

183

00:07:38,629 --> 00:07:37,120

banknote

184

00:07:40,469 --> 00:07:38,639

uh and i really look forward to using

185

00:07:44,869 --> 00:07:40,479

these new polymer notes uh when i get

186

00:07:51,670 --> 00:07:48,469

hi it's jim flaherty again um

187

00:07:53,830 --> 00:07:51,680

the new commander at field

188

00:09:47,269 --> 00:07:53,840

fault

189

00:09:52,389 --> 00:09:50,310

thank you thank you commander um your

190

00:09:54,550 --> 00:09:52,399

your career is an example of excellence

191

00:09:56,870 --> 00:09:54,560

and we all agree that there are

192

00:10:00,310 --> 00:09:56,880

there are no shortcuts to excellence it

193

00:10:02,310 --> 00:10:00,320

requires tenacity requires dedication

194

00:10:04,310 --> 00:10:02,320

uh there's someone else with us here

195

00:10:06,710 --> 00:10:04,320

today who can tell us about another

196

00:10:09,030 --> 00:10:06,720

historic canadian achievement that also

197

00:10:11,350 --> 00:10:09,040

uh took a long time and so it's my

198

00:10:13,590 --> 00:10:11,360

pleasure uh to introduce paul g smith

199

00:10:23,030 --> 00:10:13,600

the chairman of the board of via rail uh

200

00:10:27,269 --> 00:10:24,790

thank you mr flaherty

201
00:10:29,509 --> 00:10:27,279
governor kearney and commander commander

202
00:10:44,870 --> 00:10:29,519
headfield

203
00:10:44,880 --> 00:10:48,069
foreign

204
00:10:57,350 --> 00:10:51,110
i'm supposed to hold this up minister

205
00:11:00,550 --> 00:10:58,470
judy

206
00:11:03,269 --> 00:11:00,560
is that what you want yeah you have an

207
00:11:07,030 --> 00:11:05,750
i share commander hatfield's sentiment

208
00:11:09,750 --> 00:11:07,040
when he says

209
00:11:12,150 --> 00:11:09,760
that anything is possible with hard work

210
00:11:14,870 --> 00:11:12,160
and dedication and collaboration

211
00:11:17,269 --> 00:11:14,880
that is true now but it was also very

212
00:11:20,790 --> 00:11:17,279
true in the 1880s with the completion of

213
00:11:26,710 --> 00:11:20,800

the world's longest railway of the time

214

00:11:26,720 --> 00:12:08,069

germany

215

00:12:10,470 --> 00:12:09,509

the railroad brought this country

216

00:12:13,030 --> 00:12:10,480

together

217

00:12:14,629 --> 00:12:13,040

and allowed for great economic expansion

218

00:12:17,269 --> 00:12:14,639

but not without

219

00:12:19,509 --> 00:12:17,279

enormous sacrifice and hardship workers

220

00:12:22,470 --> 00:12:19,519

coming from all over the world including

221

00:12:24,310 --> 00:12:22,480

more than 15 000 chinese workers

222

00:12:26,550 --> 00:12:24,320

battled some of the most difficult

223

00:12:29,670 --> 00:12:26,560

working conditions imaginable

224

00:12:32,550 --> 00:12:29,680

these workers heroes of canadian history

225

00:12:35,030 --> 00:12:32,560

prevailed and today with the unveil of

226

00:13:11,670 --> 00:12:35,040

this new banknote we salute their

227

00:13:16,389 --> 00:13:14,310

john h chapman a pioneer in launching

228

00:13:18,470 --> 00:13:16,399

canada's space program said

229

00:13:20,310 --> 00:13:18,480

in 1967

230

00:13:22,870 --> 00:13:20,320

in the second second century of

231

00:13:25,110 --> 00:13:22,880

confederation mr chapman said

232

00:13:27,829 --> 00:13:25,120

the fabric of canadian society will be

233

00:13:30,710 --> 00:13:27,839

held together by strands in space

234

00:13:32,629 --> 00:13:30,720

just as strongly as the railway and the

235

00:13:35,269 --> 00:13:32,639

telegraph held together the scattered

236

00:13:36,629 --> 00:13:35,279

provinces in the last century

237

00:13:37,590 --> 00:13:36,639

i think the fact that we're having an

238

00:13:39,350 --> 00:13:37,600

event

239

00:13:41,430 --> 00:13:39,360

with commander hatfield participating

240

00:13:44,710 --> 00:13:41,440

from space is proof

241

00:13:46,389 --> 00:13:44,720

that mr chapman was a visionary

242

00:13:48,949 --> 00:13:46,399

a generation ago

243

00:13:50,870 --> 00:13:48,959

no one could have imagined emailing or

244

00:13:51,750 --> 00:13:50,880

surfing the internet while traveling by

245

00:13:53,829 --> 00:13:51,760

train

246

00:13:55,670 --> 00:13:53,839

let alone by space

247

00:13:58,069 --> 00:13:55,680

now the frontiers of science and

248

00:14:00,949 --> 00:13:58,079

technology continue to expand and

249

00:14:02,790 --> 00:14:00,959

converge changing the way we live

250

00:14:05,030 --> 00:14:02,800

work play

251

00:14:07,829 --> 00:14:05,040

communicate and travel

252

00:14:09,590 --> 00:14:07,839

on behalf of via rails president and ceo

253

00:14:12,069 --> 00:14:09,600

mr marc liberty

254

00:14:14,230 --> 00:14:12,079

and on behalf of everyone at via i'd

255

00:14:15,910 --> 00:14:14,240

like to thank the bank of canada for

256

00:14:16,870 --> 00:14:15,920

including us in this very special

257

00:14:18,870 --> 00:14:16,880

project

258

00:14:20,870 --> 00:14:18,880

the creation of a banknote that will be

259

00:14:55,990 --> 00:14:20,880

in the hands of canadians later this

260

00:14:56,000 --> 00:15:05,590

in privilege

261

00:15:13,189 --> 00:15:07,670

and thank you very much and goodbye to

262

00:15:21,350 --> 00:15:16,069

station this is houston acr thank you

263

00:15:25,670 --> 00:15:23,269

thank you bank of canada