# New York Community Aviation Roundtable (NYCAR)
## Meeting: Wednesday, January 22, 2020
7:00 – 9:00 PM

*Queens Borough Hall--Rm 213*
*155-20 Queens Boulevard*
*Kew Gardens, NY*

**Co-Chairs:**
*Barbara E. Brown*
*Warren Schreiber*

***Facilitator:***
*Bill Huisman*

## Agenda

1. Welcome and Introductions                                                     7:00

2. Minutes                                                                        7:10

3. Research Findings on Airport-Related Air Pollution                            7:15
   *Neelakshi Hudda, Ph.D*
   *Research Assistant Professor,*
   *Civil and Environmental Engineering*
   *Tufts Institute of the Environment*

4. State-of-the-art AI and Sensor Networks for Automatic Airplane
   Noise Detection and Tracking.                                                 7:55
   *Tae Hong Park, Ph.D*
   *Associate Professor*
   *Director Music,  Composition Program*
   *Faculty, Music Technology*
   *Department of Music and Performing Arts Professions*
   *New York University/Steinhardt*

5. FAA Northeast Corridor Project Update                                         8:25

5. NYCAR Member Questions Re: Reauthorization Act
   to be Addressed by FAA at April 22, 2020 Meeting                              8:40

6. Airport Committee Sharing                                                     8:45
   a. JFK Airport Committee        Barbara E. Brown, Chair
   b. LGA Airport Committee        *Warren Schreiber, Chair*

7. Public Comment Period                                                         8:55

8. Adjournment                                                                   9:00

# SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

1/22/2020

## NYCAR - John F. Kennedy International Airport Committee

| US House of Representatives | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Congressman Tom Suozzi | 3* | Justin Connor | Justin Connor | Just. J. Conner | 631-927-4107 |
| Congresswoman Kathleen Rice | 4* | Tom Curry | | | |
| Congressman Gregory Meeks | 5* | Dan Mundy | | | |
| Congressman Gregory Meeks | 5 | Patrick Evans | | | |
| Congressman Hakeen Jeffries | 8 | Freida Menos | Frieda Menos | Fmerlm | 718-373-0033 frieda.menos@mail.house gov |
| **Queens Borough President** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| QBP Melinda Katz | | Gloria Boye-Charles | Gloria Boyce-Charles | GBCharles | 917-415-3916 gmcharles@aol |
| QBP Melinda Katz | | Dennis Graham | Dennis Grah | | 917 832 8088 Dengrah bkoy |
| **New York State** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Senator Todd Kaminsky | 9* | ~~Aidan Hughes~~, Leon Meyers | Leo Meyers | Leo Meyers | 516-766-8383 |
| Senator Anna Kaplan | 7* | Rebecca Sheehan, Alexis McDonnell | | | |
| Senator Kevin Thomas | 6* | ~~Ethan Mogavero, Donna Nogid~~ | Muneeb Zia | | |
| Senator James Sanders | 10 | Tajuana Hamm, Chiedu Uzagwe | | | 516-739-1700 |
| Senator Leroy Comrie *** | 14 | Earnest Flowers | Carmine Coulode | Car Co | |
| Senator Joseph Addabbo *** | 15 | Jeff Griffin | | | (718) 765-6359 |
| **New York State Assembly** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Assemblywoman Michele Titus | 31 | Barbara Brown (Chair) | Barbara E. Brown | BE Brown | 347 824-2301 |
| Assemblywoman Melissa Miller | 20* | Joseph Biocchi | | | |
| Assemblywoman Michaelle Solages | 22* | Joshua Joseph, Italia Granshaw | | | |
| Assemblywoman Alicia Hyndman *** | 29 | TBD by Kevin Tschirhart, COS | | | |
| Assemblywoman Vivian Cook *** | 32 | Assemblywoman Vivian Cook | | | |
| Assembly Member Stacey P. Amato *** | 23 | Amanda Kernozek | | | |
| Assembly Member Edward RA | 19 | Veronica Ebhuoma, Connor Dunleavy | | | |
| Assemblyman Clyde Vanel | 33 | ~~Jevaughn Williams~~, Clyde Vanel | Aaron ~~Bruno~~ Ambrose | C | 718-479-2333 |

## SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

1/22/2020

### NYCAR - John F. Kennedy International Airport Committee

| New York City Council | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Councilman Eric Ulrich *** | 32 | TBD | | | |
| Councilman Donovan Richards | 31 | Manny Silva | | | |
| Councilwoman Adrienne Adams | 28 | Jamal Wilkerson | | | |
| Councilman I. Daneek Miller | 27 | Ali Rasoulinejad | | | |
| **Nassau County Executive** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Laura Curran | * | Jared Fischedick | | | |
| **Town of North Hempstead** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Judi Bosworth | * | Michael Anderson | | | |
| **Town of Hempstead** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Town of Hempstead | * | Andrew Weiss | ANDREW WEISS | *(signature)* | A2WEISS @ AOL. COM |
| **Queens Community Boards** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Queens Community Board 9 | | David Smith, Kenich Wilson | | | |
| Queens Community Board 10 | | Betty Bratton/Peter Granikas | PeteR GRANICKAS | *(signature)* | 917-3371882 |
| Queens Community Board 12 | | Michelle Keller | | | |
| Queens Community Board 13 | | Mark McMillan, Clive Williams | | | |
| Queens Community Board 14 *** | | Dolores Orr | | | |
| **Brooklyn Community Board 5** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Brooklyn Community Board 5 | | Andre Mitchell, Melinda Perkins | | | |
| **Queens Chamber of Commerce** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Queens Chamber of Commerce *** | | TomGrech | | | |
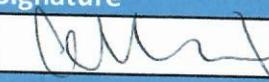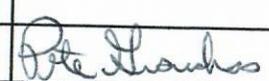
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# SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

1/22/2020

## NYCAR - John F. Kennedy International Airport Committee

| Business/Councils | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Aviation Development Council | | Bill Huisman (Facilitator) | BILL HUISMAN | *(signature)* | |
| Airlines(Jet Blue) | | Kevin Costello, Kate McMillan | | | |
| Airlines (Delta) | | Robert Goldman | Robert Golon | *(signature)* | |
| NYC & Company | | TBA (non-voting Mem) | | | |
| KAAMCO *** | | Ajay Dahwan/Brian Cooley | | | |
| JFK Chamber of Commerce | | Joe Clabby, P. Kateron | | | |
| Gateway JFK (JFK IBID) | | Frank Ligio, Scott Grimm-Lyons | Scott Grim Lyon | *(signature)* | 631-741 865 - scott@ gateway jfk.oo's |
| Local Airport-Related MWBE | | James Heyliger | JAMES HEYLIGER | *(signature)* | 917 951 3513  HEYLIGER JR@olrc.com |

| Other | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Citizen Members | | Dawn Roberts-Semple | | | |
| Citizen Members | | Larry Hoppenhauer | Larry Hoppenhauer | LARRYHoppenhauer | |
| NYCEDC | | David Hopkins (Non-Voting Mem) | | | |

| Guest | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| FAA | | | | | |
| FAA | | | | | |
| FAA | | | | | |
| FAA | | | | | |
| FAA | | | | | |
| PA | | Stacy Gilbert | Stacy Gilbt | *(signature)* | vgilbert@panynj.gov |
| PA | | | | | |
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# SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

1/22/2020

## NYCAR - John F. Kennedy International Airport Committee

| Guest | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Brown, Beverley | | Brookville Com. | Beverley Brown | Beverley Brown | 718 525-4399 BRB1957@aol |
| Muno Lence | | Elizabeth Crowley | | | 917-495-2289 Elizabeth |
| Elaine Short | | NAACP | Greg. Meeks | | |
| CELESTE JAMES | | | | | 646552 0004 |
| Sharina Bryce | | Concerned Citizens of Laurelton | Sharina Bryce | SB | SharinaBryce @yahoo |
| Sandra Barron | | CCOL | Sandra.d.barron@gmail.com | | |
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# SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

01/22/2020  NYCAR

| NYCAR - LaGuardia Airport Committee | | | | | |
|---|---|---|---|---|---|
| **US House of Representatives** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Congressman Tom Suozzi | 3 | Justin Connor | | | |
| Congresswoman Grace Meng | 6 | Maria Becce | Maria Becce | | 917-257-5622 |
| Congresswoman A. Ocasio-Cortez | 14 | Michelle Hernandez | | | |
| Congressman Hakeem Jeffries | 8 | Marie Figueroa | Marie Figueroa | | |
| Congresswoman Caroline Maloney | 12 | Ed Babor | | | |
| **Queens Borough President** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| QBP Melinda Katz | | Allan Swisher | ALLAN SWISHER | | 718 286 2880 |
| QBP Melinda Katz | | Lei Zhou | LEI ZHOU | | |
| **New York State Senate** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Minority Leader John Flanagan*** | 2 | TBC | | | |
| Senator John Liu | 11 | A. Patel | Ashley Lin | | (718) 765-6675 ashley@johnliusenate.com |
| Senator Julia Salazar*** | 18 | TBD | | | |
| Senator Tony Ann Stavisky | 16 | | | | |
| Senator Jessica Ramos | 13 | TBD | | | |
| **New York State Assembly** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Assemblyman Jeffrion Aubry | 35 | | | | |
| Assemblyman Edward Braunstein | 26 | Assemblyman Edward Braunstein | Kieran Mahoney | KMahoney | mahoneyk@nyassembly.gov |
| Assemblyman Marcos Crespo*** | 85 | Yianna Munoz-Justo | | | |
| Assemblyman Michael DenDekker | 34 | Alexandra Casey or Ken mendoza | | | |
| Assemblyman Daniel Rosenthal | 27 | | | | |
| Assemblyman Brian Barnwell | 30 | Sean Simmons | | | |
| Assembly Member Ron Kim | 40 | Tony Cao | | | |
| Assemblywoman Aravella Simotas | 36 | Alexia Makrigiannis | | | |
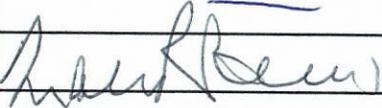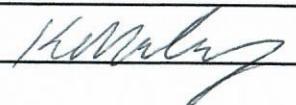
# SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

01/22/2020 NYCAR

| NYCAR - LaGuardia Airport Committee | | | | | |
|---|---|---|---|---|---|
| **New York City Council** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Councilman Paul Vallone | 19 | TBC | | | |
| Councilman Peter Koo | 20 | Scott Sieber | Scott Sieber | | ssieber@council.nyc.gov |
| Councilman Francisco Moya | 21 | | | | |
| Councilman Costa Constantinides | 22 | Nick Widzowski | NICK WIDZOWSKI | | 718-274-4500, NWidzowski@council.nyc.gov |
| Councilwoman Diana Ayala*** | 8 | | | | |
| Councilman Corey Johnson | 3 | | | | |
| **Queens Community Boards** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Queens Community Board 1 | | Rose Marie Poveromo or Ed Babor | | | |
| Queens Community Board 2 | | Denise Keehan-Smith | Denise Keehan-Smith | | 718-533-8773 |
| Queens Community Board 3 | | Brown, Anne | ANN BROWN | | |
| Queens Community Board 4 | | Christian Cassagnol | | | |
| Queens Community Board 5 | | Gary Giordano | | | |
| Queens Community Board 6 | | Joseph Hennessy | | | |
| Queens Community Board 7 | | Warren Schreiber (Vice Chair) | WARREN SCHREIBER | | WARRENNYC@GMAIL.COM |
| Queens Community Board 8 | | Seymour Schwartz | | | |
| Queens Community Board 11 | | Joan Garippa | JOAN GARIPPA | | (718) 225-1054 CB#11 |
| **Bronx Community Boards** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Bronx Community Board 10*** | | Martin Prince | | | |
| Bronx Community Board 2*** | | Dr. Ian Amritt or Ronan Lopez | | | |
| **Queens Chamber Of Commerce** | **District** | **Representative(s)** | **Print Name** | **Signature** | **Phone and Email** |
| Queens Chamber Of Commerce | | Tom Grech | | | |

Assemblymember Pheffer Amato    michael Matteo    718-945-9550

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# SIGIN IN SHEET FOR NEW YORK COMMUNITY AIRPORT ROUNDTABLE

01/22/2020  NYCAR

## NYCAR - LaGuardia Airport Committee

| Business/Councils | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Aviation Development Council | | Bill Huisman (non-voting) | BILL HUISMAN | *(signature)* | |
| Airlines (American) | | Eric Silverman | | | |
| Airlines (Delta) | | Robert Goldman | Robert Goldman | *(signature)* | |
| NYC & Company | | Dena Libner | | | |
| LAAMCO | | Chris White-DeVries | | | |
| Local Airport-Related MWBE*** | | James Heyliger | | | |

| Other | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Citizen Members | | Elaine Miller | | | |
| NYCEDC | ✓ | David Hopkins (Non-Voting Mem) | | *(signature)* | |
| Citizen Members | | Frank Taylor | | | |

| Other | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Port Authority of NY/NJ | | | | | |
| ALER DMYTRISZYN | | | | *(signature)* | |
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| Guest | District | Representative(s) | Print Name | Signature | Phone and Email |
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| NYCAR - LaGuardia Airport Committee | | | | | |
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| FAA | | | | | |
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| Guest | District | Representative(s) | Print Name | Signature | Phone and Email |
|---|---|---|---|---|---|
| Shakeera N. James-Welch | | Eastern Queens Alliance | | | environmentalspc@gmail.com |
| Neelakshi Hudda | | | NEELAKSHI HUDDA | | |
| Ralph Tamburro | | PORT AUTHORITY | | | |
| Marie Hopkins | | DELTA AIR LINES | | | MARIE.A.HOPKINS@DELTA.COM |
| LEE BROWN | | JETBLUE | | | |
| Glenn MORSE | | UNITED AIRLINES | Glenn Morse | | glenn.morse@united.com |
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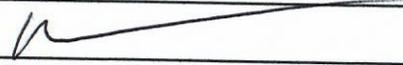
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3                NEW YORK COMMUNITY AVIATION

4                     ROUNDTABLE (NYCAR)

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6                          on the

7               Wednesday, January 22, 2020

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10                              Time: 7:00 p.m.

11                              Queens Borough Hall

12                              Room 213

13                              155-20 Queens Boulevard

14                              Kew Gardens, New York

15     APPEARNACES:

16     Co-Chairs:

17     BARBARA E. BROWN

18     WARREN SCHREIBER

19

20     Facilitator:

21     BILL HUISMAN

22

23

24     Reported by:

25     JUDEEN M. DENNISTON

1
2      - P R O C E E D I N G S -
3          WARREN SCHREIBER:  Good evening,
4      everyone. Good evening. I want to
5      thank everybody for coming. I ask
6      everybody to put your cellphones
7      off. The seats at the table are for
8      the members of the roundtable.
9          Guests, there are other seats
10     around and guests are asked to be
11     seated at some of the other seats.
12         We can start now. We have an
13     ambitious agenda. Go around the
14     room, we'll start with the
15     introductions.
16         My name is Warren Schreiber, I
17     am co-chair of the Roundtable and I
18     chair the LaGuardia Committee. I am
19     here representing Community Board 7.
20         BARBARA BROWN:  I am Barbara
21     Brown. I am co-chair of the
22     Roundtable, chair of the JFK Airport
23     Committee, and represent Assembly
24     District 31.
25         UNKNOWN SPEAKER:  Hi, I'm

1
2      [inaudible], recording secretary of
3      the LaGuardia Committee. I'm
4      representing acting Queens Borough
5      President Sharon Lee.
6          NICK WIDZOWSKI:  Hi, I'm Nick
7      Widzowski [phonetic], representing
8      City Councilman Costa
9      Constantinides.
10         PETER GRANICKAS:  Hi, Peter
11     Granickas, representing Community
12     Board 10.
13         MICHAEL MATTEO:  Michael Matteo,
14     representing Assemblywoman Stacey
15     Pheffer Amato.
16         ALLAN SWISHER:  Allan Swisher,
17     for Queens Borough President Sharon
18     Lee.
19         FREIDA MENOS:  Frieda Menos from
20     Congressman Hakeem Jeffries' office,
21     JFK Committee.
22         ANDREW WEISS:  Andrew Weiss,
23     representing the town of Hempstead.
24         LARRY HOPPENHAUER:  Larry
25     Hoppenhauer, citizen member.

1
2          CARMINE:  Carmine [inaudible ],
3      representing Senator Comrie's
4      office.
5          JOAN GARIPPA:  Joan Garippa,
6      Community Board 11.
7          MARIA BECCE:  Maria Becce,
8      representing Congresswoman Grace
9      Meng, and First Vice-chair of the
10     LaGuardia Committee.
11         BILL HUISMAN:  Bill Huisman with
12     Aviation Development Council. I'm
13     the facilitator for the meeting. I'm
14     just going to remind everybody,
15     please, when you ask questions or
16     when you're introducing yourself,
17     speak very clearly, because we have
18     a stenographer here who's keeping
19     all the notes and she would like to
20     hear us. Thank you.
21         DENISE KEEHAN-SMITH:  Hi, my
22     name is Denise Keehan-Smith and I'm
23     Chairwoman of Community Board 2.
24         SCOTT GRIMM-LYON:  My name is
25     Scott Grimm-Lyon, I'm the Executive

1
2      Director of Gateway JFK which is a
3      business improvement district that
4      largely focuses on the air cargo
5      industry, subject to airport --
6          GLORIA BOYCE-CHARLES:  Good
7      evening, Gloria Boyce-Charles
8      representing Queens borough
9      president.
10         LEO MEYERS:  Hi, Leo Meyers from
11     Senator Todd Kaminsky's office.
12         KIERAN MAHONEY:  Kieran Mahoney,
13     representing Assemblyman Ed
14     Braunstein.
15         ROB GOLDMAN:  Good evening, Rob
16     Goldman, Delta Airlines.
17         RALPH TAMBURRO:  Good evening,
18     Ralph Tamburro, Port Authority.
19         MARK HOPKINS:  Mark Hopkins,
20     Delta Airlines.
21         ELAINE SHORT:  Elaine Short, the
22     president of Far Rockaway NAACP.
23         HERSH PAREKH:  Good evening
24     everybody, Hersh Parekh, Port
25     Authority.

1
2       JOHN ESPINAZA:  Good evening,
3   John Espinaza, Port Authority.
4       STACEY GILBERT:  Hi everyone,
5   Stacey Gilbert, Port Authority.
6       DAVID HOPKINS:  Good evening,
7   David Hopkins, New York City
8   Economic Development Corporation.
9       ANNE BROWN:  Hi, Anne Brown,
10  Queens 3.
11      CELESTE JAMES:  Good evening
12  all, Celeste James [phonetic],
13  Community Board 12.
14      ASHLEY LYNN:  Ashley Lynn,
15  representing Senator John Liu.
16      LEE BROWN:  Good evening, Lee
17  Brown, with JetBlue Airways.
18      MARIE KENNINGTON-GARDINER:
19  Marie Kennington-Gardiner,
20  representing the Office of the
21  Regional Administrator of Affairs.
22      JENNY LUNDSFORD:  Jenny Lundford
23  [phonetic], FAA Contracts Support.
24      BILL WYANS:  Bill Wyans
25  [phonetic], FAA.

1
2       ROBERT MELBIA:  I'm Robert
3   Melbia [phonetic], FAA, Washington,
4   D.C.
5       RON MORRIS:  Ron Morris, United
6   Airlines.
7       UNKNOWN SPEAKER:  [inaudible],
8   Port Authority.
9       UNKNOWN SPEAKER:  Have we hit
10  everybody?
11      WARREN SCHREIBER:  I think so.
12      UNKNOWN SPEAKER:  Back to you,
13  Warren.
14      WARREN SCHREIBER:  Very good.
15  And again, if you are a member of
16  the Roundtable, if you're
17  representing an elected member of
18  Roundtable, please.
19      All right, take a seat at one of
20  the tables. And now, I'm really
21  pleased that joining us tonight is
22  our Acting Borough President, Sharon
23  Lee.
24      Sharon, thank you.
25      SHARON LEE:  Thank you, Mister

1
2   and Madam Chairs and for your
3   leadership and your stewardship of
4   this important Aviation Roundtable.
5   Good evening, everyone.
6       (AUDIENCE:  Good evening.)
7       SHARON LEE:  As mentioned, to
8   those who may not know, my name is
9   Sharon Lee. I have the honor and
10  privilege of serving as your acting
11  borough president. I want to welcome
12  you back to Queens Borough Hall. If
13  hadn't been here since the new year,
14  Happy New Year. I am serving as your
15  acting borough president for a brief
16  period of time. And part of that is
17  to ensure that some of the borough's
18  top priorities which include the
19  multi-billion dollar overhaul
20  underway of our two airports
21  continues, and not just for the sake
22  of overhauling and redevelopment
23  which is critical to our borough's
24  future.
25      It is critical to keeping us

1
2   globally competitive as a borough,
3   as a city, as a country. It is
4   critical to our future, but also a
5   lot of the issues that come up with
6   overhauling with modernizing, with
7   expanding to an extent, are how that
8   impacts the existing neighborhoods,
9   the existing families, Queens. We
10  know ourselves to be the borough of
11  families, and we know that the
12  overhauls underway at both LaGuardia
13  and Kennedy do impact tens of
14  thousands of families in the
15  immediate vicinity.
16      So I know that these roundtables
17  are critically important to ensure
18  continuous dialogue with everybody
19  involved with the changes underway
20  at both ports and making sure that
21  we do talk ... not just talk about,
22  but as much as we can address the
23  fundamental quality of life issues
24  like noise, pollution, air
25  congestion, traffic.

3 (Pages 6 - 9)

1
2      I can't tell you how many times
3   I've been stuck at one of those
4   airports and poor Hersh had to field
5   my calls, whether it's coming off of
6   a red eye or late into ... all hours
7   of the night. I am certainly not shy
8   and calling the port being like,
9   "Why am I stuck here? Or why can't I
10  get to my flight?"
11     But again, all of those changes
12  that need to come into play cannot
13  be done without ensuring and trying
14  to mitigate them, as much as
15  possible, any kind of negative
16  impact on our families and our
17  neighborhoods. And so thank you very
18  much for your indulgence. I know we
19  have a full agenda tonight, but I
20  just wanted to say hi. I believe
21  this may be the only joint committee
22  roundtable meeting under my very
23  brief tenure.
24     And while I'm here I would like
25  to remind you that there is a

1
2   special election on March 24th. If
3   you are a resident and a registered
4   voter here at Queens, I urge you to
5   vote. I can talk about it because I
6   am not on the ballot, but we want to
7   encourage everyone to vote. Vote
8   often.
9      And a couple of other items as
10  priorities here in the borough of
11  Queens, we are outlining our budget
12  priorities for Q1 of 2020 for the
13  upcoming fiscal year. The mayor just
14  announced preliminary $95 billion
15  budget for the city of New York and
16  we want to make sure that the
17  borough of Queens gets our fair
18  share.
19     So our budget priorities, we
20  have a budget hearing next Wednesday
21  in this very room, 10:00AM if you
22  haven't registered to testify and if
23  you'd like to, you're certainly
24  welcome to. We encourage you to.
25  Community board applications, sorry,

1
2   community board applications. We are
3   accepting that here at Borough Hall
4   and the deadline is January 31st
5   and, of course, census. Census 2020
6   is underway and that is a top
7   priority on the immediate horizon
8   because if we don't count, if we are
9   not counted, we do not matter. We
10  know that if you don't vote, we
11  don't matter.
12     So I remind you, a friendly
13  reminder, courtesy of your friends
14  here at Borough Hall. But thank you
15  for the indulgence and I look
16  forward to working more closely with
17  each and every one of you in the
18  coming weeks.
19     Thank you.
20     WARREN SCHREIBER:  Okay. Also
21  Acting Borough President, what do
22  you think?  We could get used to the
23  room.
24     (AUDIENCE:  Yes.)
25     SHARON LEE:  My pleasure.

1
2      WARREN SCHREIBER:  We do
3   appreciate it.
4      Thank you.
5      Moving on to the minutes. We
6   cannot act on minutes because we
7   don't have a quorum and we didn't
8   have a quorum at the last meeting.
9   But we do have meeting notes and
10  they are up on the website and I
11  encourage everybody to take a look
12  at it and read the minutes, the
13  meeting notes, and update yourselves
14  on what we have been discussing.
15     And now I'm going to turn this
16  over to Barbara, who will introduce
17  the first presentation.
18     (AUDIENCE: Applause.)
19     BARBARA BROWN:  Okay. Thank you.
20     Just the in terms of the notes
21  for the last meeting, I, too, really
22  encourage you to really read them
23  because at the April 22nd meeting we
24  asked the FAA to come back and give
25  us responses to a lot of our

4 (Pages 10 - 13)

1
2  questions about the reauthorization
3  bill, so it's important that you
4  look back at those notes because
5  they, our court stenographer really
6  had all of your words down and all
7  of the questions that were raised
8  are in that packet.
9      So we have a little section
10 later on where we'll give you a
11 chance to add anything that you
12 might have thought of that you
13 didn't voice then. But it's
14 important to go back over those
15 notes and those...
16     So we didn't have a quorum then.
17 So they're not official minutes, but
18 they are official notes from that
19 meeting. At this time, this meeting
20 primarily is informational. We've
21 been talking a lot about air
22 pollution and noise pollution and
23 getting the FAA and the Port
24 Authority to share their wisdom with
25 us and give us information about all

1
2  the regulations and so forth that
3  are out there. But we as
4  stakeholders and representatives of
5  stakeholders, it's important that we
6  have as much information as possible
7  from other sources other than the
8  airport operators and the airport
9  regulators.
10     So at this time, we're going to
11 bring up our first speaker.
12 Neelakshi Hudda who has a PhD at
13 Tufts Institute of the Environment.
14 I first met Neelakshi -- what, about
15 three, four years ago with my
16 Eastern Queens Alliance hat. We were
17 doing a small citizen science
18 project and I discovered that there
19 was an important study out of LAX
20 that kind of informed us about some
21 of the concerns with air quality.
22     And when I called out there to
23 speak to the researchers and ask,
24 "Well, is there anybody back east
25 who's doing similar work?" They

1
2  directed me to, no, actually she had
3  just come to the Eastern Seaboard
4  and she volunteered her time,
5  really. Gave us a lot of good
6  information and since then she's
7  gone up to Boston at Tufts and is
8  doing a lot of good work up there.
9      On the JFK Airport Committee, we
10 have a small website for coming out
11 of our research and development
12 committee, subcommittee and some of
13 the information about her reports
14 are on there. So I want to bring
15 forth Neelakshi -- Dr. Neelakshi
16 Hudda --
17     (AUDIENCE: Applause.)
18     DR. HUDDA:  So thank you again
19 for providing me an opportunity to
20 speak about my research.
21     UNKNOWN SPEAKER:  Can you speak
22 closer to the mic.
23     DR. HUDDA:  Is this better now?
24     UNKNOWN SPEAKER:  Closer.
25     DR. HUDDA:  I might just have to

1
2  hold it.
3      UNKNOWN SPEAKER:  That's
4  perfect.
5      DR. HUDDA:  I'm a new mother, I
6  haven't had much practice.
7      DR. HUDDA:  I will be going over
8  a lot of findings. Hopefully I've
9  distilled them down to our key
10 findings. This work was done in Los
11 Angeles, which is what Gabrielle
12 encountered and then I moved to
13 Boston where I've continued this
14 work. So those are the two cities
15 that are being presented in our
16 findings from. There was an
17 interesting contrast other than the
18 two coasts and the obvious weather
19 difference between the two cities.
20     DR. HUDDA:  So researchers study
21 aviation emissions at vastly
22 different scales ranging from global
23 to local. It's somewhat the nature
24 of the impact that dictates the
25 scale at which we study them and

5 (Pages 14 - 17)

1
2       sometimes it's also the regulatory
3       jurisdiction at which we need to
4       take inventory of a certain
5       pollutant which dictates the scale
6       at which we study them.
7           DR. HUDDA:  For example, if
8       you're looking at global impacts and
9       lots of studies that study the
10      impact on climate change coming from
11      soot that's released at really high
12      altitudes, global burden of disease
13      resulting from that. At national
14      scale something that comes to my
15      mind is the last few studies, I take
16      inventory of lead, which is one of
17      the regulated toxic pollutants,
18      national ambient air quality
19      standards as separate and then
20      regionally a lot of focus on NOx
21      which has a nitrogen dioxide species
22      which is also regulated pollutant.
23      Airplanes do have a lot of NOx too,
24      it's sky and sky are some what
25      regulated at a local regional level

1
2       together these two results in
3       adverse environmental exposures and
4       health effects. Which have been
5       studied a lot and I will go into a
6       few details. But then the other
7       impacts as well, like compromise
8       quality of life or socioeconomic
9       stressors like depressed poverty
10      levels. Our focus on noise and air
11      pollution and in the few slides I
12      tried to set the contrast between
13      what the knowledge gap is, between
14      sound or noise research was this air
15      pollution research in local
16      communities around airfields.
17          DR. HUDDA:  So we know for sure
18      that exposure to noise has adverse
19      side effects. We also know that
20      exposure to elevated levels of noise
21      from specifically aircraft's is
22      associated with a host of other
23      effects. I'm happy to provide
24      references, they are tons of them.
25      In short, I will summarize that

1
2       and that's where you'll see a lot of
3       modeling and taking inventory of
4       stock of what's going on. Until
5       about of 10 years ago, this was
6       mostly to focus on the research.
7           DR. HUDDA:  If you started
8       looking at local scale, there were
9       lots of studies that would go on and
10      make measurements really close to
11      the runway and measure what is
12      coming out of the airplanes that are
13      taking off or when they are landing.
14          DR. HUDDA:  But there wasn't
15      much in terms of trying to
16      understand what the local impacts
17      are, in the communities around and I
18      think that's the gap that our
19      research has being trying to fill
20      for the past 10 years. So at local
21      spatial scales there's obviously
22      noise or unwanted sound which is
23      very palpable and so deep concern.
24      Then we also encounter high
25      concentrations of air pollutants and

1
2       there's really good research out
3       there that says, that increased
4       rates of these five things, that
5       I'll go over can be found in
6       communities adjacent to airfields.
7           DR. HUDDA:  Hyper tension rates
8       are high, but then self medication
9       prescription, cardiovascular disease
10      incidents, cardiovascular disease
11      hospitalization and learning impacts
12      or learning outcomes in children.
13          DR. HUDDA:  Now there was really
14      interesting study where in Munich an
15      airport was moved. Then they looked
16      at scores from the place where it
17      was moved slowly the kids learning
18      performance improved, in the two
19      years when it moved to a new
20      location, there you could over the
21      two years see some kind of increase
22      in learning scores, standardized. So
23      pretty good research out there on
24      this.
25          DR. HUDDA:  FAS to some extent,

1
2  recognizes the adverse noise impacts
3  and does provide mitigation within
4  the 65 DNL zone. If you live within
5  the 65 DNL zone, you can apply for
6  something to pay. I'm not sure what
7  details of that program, that's what
8  I've known from websites and
9  notifiers myself.
10      DR. HUDDA:  If you look at
11  literature on air pollution in
12  health, there's even more, there's
13  tons of literature on air pollution
14  and health. We know that exposure to
15  air pollution has adverse health
16  effects.
17      DR. HUDDA:  However, if we start
18  looking at literature on exposure to
19  elevated levels of air fusion,
20  specifically from aircraft's, or
21  airport generated air pollution,
22  then that's back to it being
23  understudied or essentially
24  unstudied.
25      DR. HUDDA:  I think to the point

1
2  in terms of local spatially, when
3  we're looking at air pollution
4  impacts. And increasingly in context
5  with aviation emissions, we have
6  observed an adverse impact on air
7  quality that stretches all around 10
8  kilometers from the airport, and I'm
9  sorry I'm kind of trying to use the
10  scientific SI unit scale of units,
11  so I'll be mixing miles and
12  kilometers here, but that's around
13  6.25 miles from the airport, is
14  something we've observed in Italy.
15      Our work has shown that impacts
16  extend much further that the spatial
17  scale that have been studied
18  previously, so before we started
19  addressing this problem, starting in
20  2012, 2013 and 2014 was when we
21  first published. In Los Angeles we
22  detected the impacts as far as 20
23  kilometers from LAX. In Boston we
24  detected impacts up to 7.5
25  kilometers. Obviously LAX is a much

1
2  of where there is recognition,
3  accountability or mitigation
4  somewhat... The way it is with some,
5  the two major improvements that need
6  to happen in the field of research.
7  One is we need to better understand,
8  and we researchers need to better
9  understand air pollution and impact
10  exposure assessment, definitely
11  should impact exposure assessment.
12  And then we need to then further
13  study what health effects are they
14  associated with, and then we can
15  start making some progress towards
16  accountability of relegation.
17      And this is where my research is
18  focused. No, this is something else
19  altogether.
20      So the first arrow on the top
21  left is where my research is focused
22  and what I'll present here. I think
23  the key contribution that our
24  research has made so far is we
25  started defining what that scale is

1
2  bigger airport that the other things
3  got to do with it, which I'll go
4  into. But the key point that I want
5  to make is not all airports are the
6  same.
7      Let me define some terms before
8  I get into the results. I keep using
9  the word 'impact'. What do I mean by
10  that? It's the increase or elevation
11  in concentration of air pollutants
12  compared to the background. How do I
13  define the background? The
14  background could be concentration
15  outside the zone of impact.
16      So where there is airport impact
17  versus where there isn't. The
18  difference between them, so we can
19  set out spatially. It could be the
20  concentration in absence of an
21  impact, like when the airport is
22  operating, the flights are operating
23  versus when it's not. The difference
24  in concentration that tamper all
25  defenses and danger zone.

7 (Pages 22 - 25)

1
2 Then there could be a situations
3 wherein, the same community is
4 impacted by airport emissions. Of
5 course if it's not, depending on
6 which way the wind is blowing, then
7 you can collect a lot of data and t-
8 solve the differences between those
9 two conditions and define what the
10 impact is.
11 So it's essentially all of these
12 techniques, depending on the study
13 context, come down to presence
14 versus absence of the source, and
15 then we figure out what the
16 difference is. And then air
17 pollution is of course a very wide
18 term that covers a wide range of
19 pollutants, it's a very blanket
20 term.
21 If these could be gases
22 pollutants, these could be
23 particular pollutants. These could
24 be pollutants coming out of jet
25 engine exhaust, which is of course a

1
2 big source. Or it could be non-
3 exhaust emissions from ground-
4 support equipment and other
5 activities around the airport.
6 Lots of cars travel to the
7 airport, those are also emissions
8 associated with the airport. Then
9 there are regulated pollutants and
10 there are unregulated pollutants and
11 there are many other ways of
12 classifying things or categories in
13 scientific term or calculation.
14 Another important point to
15 consider is that exposure occurs to
16 a complex mixture of these
17 pollutants which evolves with time
18 and distance from the airport. And
19 then it interacts with the
20 microenvironment where the exposure
21 is -- so if you're outdoors outside
22 your house, it's a different mix and
23 a different exposure, compared to
24 when you're indoors, compared to
25 when you're indoors whether you're

1
2 seen running all the windows down.
3 Exposure is very complicated and
4 I won't get into that, but making
5 air pollution measurements
6 themselves outside or inside, that I
7 will be presenting. There's a lot of
8 air pollutants that we could go
9 over.
10 The one I selected today is
11 called ultra-fine particles. It's an
12 excellent source of jet exhaust
13 emissions. As the exhaust cools, it
14 condenses and it forms these very
15 tiny little particles. And it's the
16 same situation, it could be with a
17 jet exhaust, it could be with a car
18 exhaust. So these are really good
19 markers of fresh emissions, ultra-
20 fine particles.
21 To give you some context, they
22 define these particles less than 100
23 nanometers, which is many magnitudes
24 of scale smaller than a human hair.
25 Human is 70 microns. They too small

1
2 to see, actually too small to
3 measure, you have to first grow
4 them, so that you can put your laser
5 beam, nab them and detect them. But
6 that is the primary pollutant that
7 we're focusing on today.
8 The metric in which we report
9 them, is the number of particles per
10 centimeter cube, per centimeter cube
11 is like a sugar cube kind of volume.
12 So the number of particles that are
13 present in a sugar cube volume of
14 air.
15 And of course they're too small
16 to see. We're talking about 100
17 nanometers here, smaller than human
18 cells. And I think because they're
19 very small, they can get very deep
20 into the lungs. This thing called
21 systemic location, they can
22 translocate into the various organs
23 in the body.
24 They're so small that they're
25 known to cross the blood brain

8 (Pages 26 - 29)

barrier, and deposit directly into
the venules. And the latest EPA
impact assessment, three of the
science impact assessment on PM. I
think I'm not using the right
terminology, but if you use those
keywords you can look them up.
EPA ISA on impact of science
assessment on PM. This EPA rates the
quality of scientific evidence
associated with negative impacts of
ultra-fine particles as likely to be
causal or neurological or central
nervous system disorders.
Our biggest contribution so far
to this literature has been, that
we've discovered a very large
spatial zone of impact when it comes
to adverse impacts on air quality,
especially the concentrations of
ultra-fine particles around LAX. I
was actually expecting a bigger
screen, so hopefully this is working
well for people at the back of the

room.
This is Los Angeles
International Airport, LAX. The
planes are actually drawn over the
two predominant flight trajectories
are. In LA there are only two
runways, they're parallel to each
other. Flights come in this way,
landing over the communities, take
off over the ocean. It's a very
standard pattern.
On a very -- I would say 5
percent of the time, do they switch
to a different configuration,
because LA has a very atypical wind,
they're always from west-south-west,
95 percent of the time. So that's
why they only need two runways, so
within that configuration they can
make it work.
Have you seen the darker colors
are concentrated under the flight
trajectories? And you go further and
further away, the colors get lighter

and lower concentration, darker
colors, higher concentration.
Overall, we found that there was
a 100 to 900 percent increase in the
particle number concentration. It is
extended down to 20 kilometers. Of
course, go down 20 kilometers that
increases 100 percent or two-fold.
Closer to LAX, that increases 900
percent.
Then the concentrations
increased on average by 35,000
particles per centimeter cube.
35,000 is a big number, centimeter
cube is the sugar cube of air. So
very small particles, a lot of them
in a tiny amount of air. And this
was spread on average, the impact
zone was around the area of 30 to 65
kilometers square, downwind of LAX.
Because of the way the wind
blows, their impact is concentrated
on one community downwind of LAX.
But if the wind shifts, the impact

does shift and perhaps in this video
you can see, when the wind is this
way, the impact goes a little north,
when the wind starts to have a
little bit of a southward drift, the
impact area or impact zone shifts a
little bit south.
And in rare conditions, which
usually people at LA don't like, you
get those sand fire and winds, bring
about wildfires. We see the impact
moves down south of the airport.
Depending on which way the wind is
moving with respect to the airport,
you can see the air pollution moving
or drifting down.
This is just to give you some
sense of how atypical the Los
Angeles situation is. This is Los
Angeles 95 percent of the time doing
this like that. Few times here you
can't even see it. Atlanta is a
little bit well-behaved, so there
are two sets of farrier runways in

1
2 Compton. Boston, everywhere, same
3 situation rising in Chicago.
4     When I look at runway
5 backgrounds, if I see more runways,
6 I know the wind in that area is a
7 lot more variable, you need more
8 runways to accommodate.
9     Boston had its own unique
10 challenges, it had winds that would
11 shift very quickly, so then the
12 runway configuration, the way the
13 flights are taking off and landing
14 also changes. The wind changes, and
15 the resulting impacts, they move to
16 another community. Then they're more
17 [inaudible].
18     So the impact is more
19 intermittent, and it's dispersed
20 over many downwind sectors as
21 opposed to the Los Angeles
22 situation. It's kind of good,
23 because it's communities get a
24 breather, cleaner air comes in,
25 impact grows. But, you can't escape,

1
2 so.
3     What we did in Boston, our study
4 design was we studied 16 homes,
5 short term, in two different
6 communities. Short term, by that I
7 mean two months of monitoring in
8 each home, and then long term we had
9 lots of... Three, actually. Three
10 central sites where we monitored
11 long term, for years, and the sites
12 are still running. So, we had years,
13 and years, and years of data, long
14 term there.
15     One community that we studied is
16 called the Chelsea community. It's
17 located here, Chelsea. Then this,
18 down here in the Boston area, that
19 was the second community we studied.
20 The three central sites are this.
21 This site right here, Chelsea site,
22 Roxbury and Boston Globe. We had our
23 monitors on the top of the Boston
24 Globe building. I don't know if...
25 But it's very visible on I93, if

1
2 anyone's familiar with Boston area.
3 It's right next to the highway,
4 which is an important point that
5 I'll go over.
6     When were the concentrations
7 highest, or the air pollution was at
8 all these locations we studied? I'll
9 use this tool that's called the
10 Normalized D&C Rows, to show you the
11 results. This is similar to the wind
12 rows, as I showed, where you can see
13 the configuration the wind was
14 coming from, on the wind rows.
15     Here, I've got the concentration
16 data, and I normalize it so you have
17 values going from zero to one. At
18 the center of this, means zero, and
19 somewhere at the edge, depending on
20 which way your wind direction is,
21 you'll have one, the maximum value.
22     In this particular figure we get
23 the maximum value when the wind is
24 from 150-degrees.
25     UNKNOWN SPEAKER: This is for

1
2 Boston?
3     DR. HUDDA: This is an example.
4     UNKNOWN SPEAKER: Okay.
5     DR. HUDDA: And I'll show you
6 the results.
7     UNKNOWN SPEAKER: Gotcha.
8     DR. HUDDA: So normalized D&C
9 Rows is the tool, visualization tool
10 that I'm using, which points us in
11 the direction, which direction am I
12 absorbing the highest concentrations
13 from?
14     Now, I've put those normalized
15 D&C rows on top of the three
16 locations where we have long term
17 monitoring data. At the Chelsea
18 site, you can see we have the
19 highest concentrations pointing at
20 this direction. Towards the airport,
21 the Roxbury site, same situation
22 towards the airport. Boston Globe,
23 we don't quite get the maximum. We
24 get about 80 percent of that. We get
25 the maximum when the wind is from

10 (Pages 34 - 37)

1
2 the direction of the highway. The
3 building is right next to the
4 highway, and the airport is around
5 four kilometers, four miles, away.
6      Then we looked at the same thing
7 in all the homes. Same story in
8 Chelsea. Maximum concentrations at
9 all these homes were when the wind
10 was from this direction, from this
11 direction, from this direction, from
12 this direction. That is basically
13 from this direction, when the wind
14 is from Logan. Here is the highest
15 concentrations from all those homes.
16      Okay, I would like to discuss
17 one, specific home, but I think even
18 with that, you just wouldn't be able
19 to see it, but that home was right
20 next to the highway, a few hundred
21 meters, and that home was a few
22 kilometers away from the airport,
23 and still we got 80 percent of the
24 maximum when the wind was from the
25 airport coming back to where it was

1
2 right next to the highway. So the
3 airports are a pretty big source
4 when we're trying to look at the
5 downwind, and facts that they have
6 at larger and larger distances.
7      There's one more that I'd like
8 to discuss in particular. This is a
9 home in the community of Winthrop.
10 It's within a mile from the airport.
11 It's directly underneath the flight
12 path. It's downwind a lot of the
13 time, and by that I mean northwest
14 is the predominant wind direction in
15 Boston area, so it's downwind most
16 of the time, by the way.
17      Then, it's within the 65 DNL
18 zone, and it's soundproofed. It was
19 soundproofed in early '90s, and we
20 made a lot of measurements at this
21 house. It's orientation and location
22 is somewhat similar to the JFK
23 inward situation, viewing lesser
24 events, if that helps the audience
25 here, since they are more familiar

1
2 with that layout. But, you could
3 switch the winds around so that
4 they're from the south, and apply
5 that to these on the four or 22, at
6 JFK, and then you'll have the same
7 kind of situation that I'll discuss
8 here, in the communities of
9 Brockville, [inaudible], just to
10 give you some sense of what the
11 orientation of wind is, and what the
12 distance is, at this house. I think
13 the audience here is very familiar
14 with the JFK wind rows, and the
15 [inaudible] house goes with that.
16      So, what did we find at this
17 residence? There's a concentration
18 of not just the one pollutant. You
19 also find particles which we've
20 shown in Los Angeles, and other
21 areas of Boston, but many other
22 pollutants were highest when the
23 residence was downwind of the
24 airport.
25      These wind directions place the

1
2 residence downwind of the airport.
3 If you look at these figures, again,
4 the darker colors mean higher
5 concentration. We can see that when
6 the wind is from these directions,
7 that we get the darker colors,
8 higher concentrations, and find
9 these highest concentrations.
10      This is outdoor concentrations
11 of ultra-fine particles. This is the
12 indoor concentrations of ultra-fine
13 particles. So your outdoor, indoor,
14 same factors. Whatever's outdoor,
15 does get indoor.
16      Then looked at several other
17 pollutants and we saw the same
18 thing. These are particles on pHs, a
19 lot of organics, popular organics.
20 You will see on particles on pHs,
21 which are our known particles, we
22 saw this also in an ox species, and
23 also in an ox.
24      In fact, with N02, we looked at
25 all the regulatory sites in the

11 (Pages 38 - 41)

1
2  Boston area. Concentration in all
3  the regulatory sites in the Boston
4  area, even the one that is really
5  next to the highway, EPA has now
6  near-highway monitoring that will
7  monitor the concentration of certain
8  pollutants right next to highways,
9  near roadways.
10     This house rated higher
11 concentrations than the site next to
12 the highway, but again, this was one
13 month of monitoring data. I should
14 say that. This is one month of
15 summer monitoring we did at that
16 house, and we looked at that exact
17 same month for all the other data
18 entry sets.
19     The key point there, is that a
20 whole bunch of pollutants are
21 highest, or build to the highest
22 concentrations, when the wind was
23 from the direction of the airport.
24 Then, indoor concentrations were
25 only about 25 percent lower than

1
2  outdoors.
3      So indoor does offer some
4  protection, but about 25 percent,
5  and we also had the highest
6  concentrations during evening to
7  nighttime hours, which people
8  usually spend at their homes. That
9  has got a little bit to do with the
10 meteorology and the concentrate
11 chemistry, which I'll skip over
12 today.
13     Another study finding was that
14 concentrations were highest when
15 things were landing overhead. I
16 think everyone can see that there's
17 a section of this [inaudible] that
18 stands out different from the rest
19 of it. On the right hand side, that
20 corner? Lots of spikes going up and
21 down? That is when the planes were
22 landing overhead.
23     During this part of the time
24 series, the wind is still from the
25 direction of the airport, but the

1
2  planes are not landing overhead, and
3  this is when there was almost no
4  activity at the airport.
5      So to come back to this, this is
6  still a large increase. This is
7  still a many-fold increase, but this
8  is just [inaudible] --
9      In summary and conclusion, our
10 data clearly showed at that house,
11 that in the vicinity of airports,
12 exposure to pollutants, particularly
13 ultra-fine particles and nanotubes,
14 is as significant in monitoring as
15 that observed in vicinity of
16 highways. Our research, I think
17 provides a basis for systematically
18 investigating and discussing air
19 pollution exposure, and it's
20 abatement mitigation in airport
21 vicinity.
22     Lots of work to be done, and I
23 don't want to end in all doom and
24 gloom, so we also did this, which is
25 trying to figure out what can be

1
2  done about it, and how effective it
3  can be. One really good idea is
4  filtration. Whether it's stand-alone
5  hepa-filters, or if you have
6  centralized air, you run filters. If
7  you have filters, turn them on. Use
8  them.
9      Long story short, if you're
10 looking at... So this is basically
11 showing filtration. We had to blind
12 people, so they don't know whether
13 they had actual filtration going, or
14 canned filtration. This was part of
15 an overall, big, trial on filtration
16 efficacy, but these bars are higher,
17 these bars are lower. So, that means
18 filtration does work. It does reduce
19 the concentrations, so that's a good
20 idea. Use filtration, and another
21 would be to have some known and
22 good, or informed practices about
23 how to ventilate your house. When to
24 open a window.
25      Obviously, if you are hearing

12 (Pages 42 - 45)

1
2 noise going overhead, that is not a
3 good time to open your windows. But
4 everybody keeps them closed because
5 of the noise anyways. There is lots
6 to be done but there is lots that
7 can be done for delivering that
8 message that this is a problem ...
9 this is not really a problem, there
10 is a solution that exists out there.
11 It is just a matter of implementing
12 it.
13     I can take questions and if I do
14 not have questions from the crowd,
15 then I do have one question for you
16 which is, what do you think needs to
17 be done for the community and I can
18 take notes on that.
19     DENNIS  GREYHAM:  Hi, I am
20 Dennis Greyman, Research and
21 Development Committee for JFK. And
22 we are presently trying to measure
23 aircraft noise and find particular
24 pattern at the same time, currently.
25 So we have done some tests in Auburn

1
2 higher your mean household income,
3 the less likely the planes are to go
4 over. Pretty interesting. In JFK, it
5 is probably not true because half of
6 them they are not that. But the five
7 towns, they pretty much get
8 bombarded.
9     So my question to you is what
10 can we try to do to convince the
11 FAA, since you have some data that
12 maybe by rerouting planes
13 periodically over other communities,
14 which they do not like to do. But
15 maybe that community gets pollution
16 for some time and we get less and
17 then vice versa rather than
18 bombarding one place all the time.
19 That is what seems to happen.
20     DR. HUDDA:  Right so maybe I
21 understand that but with air
22 pollution there is bigger force in
23 play which is nature and wind. The
24 wind just moves at will and cleans
25 things out really quickly. But I

1
2 which is in [inaudible] and now we
3 are going to go next to the FAA and
4 sound recorders in someone's
5 backyard and measure that. So my
6 question to you is, since I went up
7 to Boston and met with John Hansman
8 from MIT.
9     Do you know him?
10     DR. HUDDA:  Yes, I know of him,
11 not him. I know of him.
12     DENNIS GREYHAM:  Well I happen
13 to run into him. I know of him too
14 and basically he advocated that we
15 should periodically change the
16 routes of aircraft. He is a sound
17 guy for the people who do not know,
18 he measures sound and the effects of
19 sound on health. So he advocates
20 that we change the pathways of
21 flight pathways and not have this
22 persistent pathway over ...
23 constantly over communities.
24     And he is absolutely super
25 interested in things like, the

1
2 will ... so I wanted to ... I did
3 not plan but now I can. So one
4 pollutant on which I have not seen a
5 dramatic impact or at all an impact
6 is PM2.5. Because the PM2.5 is not a
7 large size of particle. Especially
8 when it takes a while for things to
9 get to the PM2.5. The PM2.5 car
10 emissions from things are not much.
11     And we are measuring it.
12     DR. HUDDA:  So I do not ... like
13 that is not .. PM2.5 is not what I
14 see as a strong signal from things.
15 It is a regional pollutant, in fact
16 what I see is like when the wind
17 moves all the way from Besseling in
18 New York up to Boston, we have these
19 ugly patterns. It sweeps over these
20 big regions. That is when you get
21 higher concentration of PM2.5. It
22 does not regulate if you do not, so
23 FAA does measure it. And I have
24 found it is correct, but I was
25 seeing a great spike in PM2.5

13 (Pages 46 - 49)

1
2  concentrations around airports in
3  any of my measurements.
4      DENNIS GREYHAM:  We are
5  measuring that. We measured .1, .25,
6  and .10.
7      DR. HUDDA:  Right. You will
8  likely see the smaller particles of
9  fresh emissions from the exhaust.
10  PM2.5 is more from emissions.
11      DENNIS GREYHAM:  Yeah I know. We
12  have that ... we are trying to get
13  that data -- the sound, is just that
14  the location by the airport right.
15  So in other words those spikes that
16  you had on the last slide with the
17  increased pollutions.
18      DR. HUDDA:  Okay.
19      DENNIS GREYHAM:  They were also
20  related to increased [inaudible] --
21      DR. HUDDA:  If that be the case
22  we are doing [crosstalk] --
23      DENNIS GREYHAM:  Right, exactly.
24  That is what we are trying to prove
25  that there is a connection between

1
2      DR. HUDDA:  Yes I will. So yes
3  as far as to ... I cannot speak to
4  what actually physiologically
5  happens in the body, that is really
6  complicated. But there are lots of
7  things that are ... I mean just
8  better communication would be just
9  ... less interruption ... with
10  noise. All that and such.
11      UNKNOWN SPEAKER:  Yeah. Thank
12  you.
13      MR. SCHREIBER:  Anybody else?
14      UNKNOWN SPEAKER:  Just a quick
15  click back where you talked about
16  who takes care of the noise
17  situation. Well what about the
18  pollutants?
19      MR. SCHREIBER:  So ...
20      UNKNOWN SPEAKER:  He does not
21  have [crosstalk] school district
22  knows right? I am familiar with
23  studies like that show the impact of
24  noise reduction kind of like
25  soundproofing the school next to a

1
2  where is the pollution.
3      MR. SCHREIBER:  Any other
4  questions?
5      UNKNOWN SPEAKER:  Since we
6  cannot change the wind what if JFK,
7  because I am particularly talking
8  about our children now, would
9  soundproof the homes in certain
10  parts of Rockaway and Jamaica within
11  the five [inaudible] would that be
12  helpful as far as our health
13  situation is concerned.
14      DR. HUDDA:  I think there has to
15  be ... actually there is a study of
16  what happens when you soundproof the
17  schools.
18      UNKNOWN SPEAKER:  Okay.
19      DR. HUDDA:  Does ... do the --
20      UNKNOWN SPEAKER:  You have a
21  study?
22      DR. HUDDA:  Yeah. I could guide
23  you to that reference.
24      UNKNOWN SPEAKER:  Could you give
25  that to our chairperson?

1
2  subway or something like that.
3      DR. HUDDA:  Right.
4      UNKNOWN SPEAKER:  Okay but we
5  ... is there a correlated impact of
6  insulation and particle reduction?
7      DR. HUDDA:  If the installations
8  practices are such that they make
9  the building tighter that would
10  reduce infiltration of particles and
11  if you should ask why and you will
12  get that benefit.
13      UNKNOWN SPEAKER:  But if she
14  said 25 percent
15      DR. HUDDA:  Yes. And if you
16  upgrade the ventilation system you
17  might have an A-Type building but
18  the ventilation system is forcing
19  the air into the whole school and it
20  does not let anything out.
21      UNKNOWN SPEAKER:  Okay.
22      DR. HUDDA:  Then 25 percent is
23  enough.
24      UNKNOWN SPEAKER:  So you talked
25  about -- so are we talking now that

14 (Pages 50 - 53)

1
2  everybody having to have central air
3  conditioning in their homes to
4  eliminate air pollution coming in?
5      DR. HUDDA:  I wouldn't say
6  everybody but [crosstalk] have to
7  have but if you have air
8  conditioning, if you have that
9  option, or if you have the choice
10  available to you to have your
11  filters clean your air. Whether you
12  live near an airport or you live
13  near a highway. Clear air is just
14  always better for everybody. So I
15  will ask this to a very good friend
16  of mine.
17      UNKNOWN SPEAKER:  Well what I am
18  basically asking you is should
19  people, he is now saying, if they
20  want to have their houses central
21  air conditioning at Federal expense?
22      UNKNOWN SPEAKER:  Yeah
23      UNKNOWN SPEAKER:  They can buy a
24  house close to an airport
25      AUDIENCE:  Yeah. Yes.

1
2  them turn on for a few hours. They
3  can bring your concentration down by
4  3-50 percent. Keep it running.
5      UNKNOWN SPEAKER:  But you are
6  talking about a HEPA filter as
7  opposed to on the air conditioner?
8  Is that what we are talking about?
9      DR. HUDDA:  You don't have
10  standard units [crosstalk] you do
11  not. HEPA filters are like HEPA next
12  to your A/C?
13      UNKNOWN SPEAKER:  Yeah.
14      DR. HUDDA:  Then when you
15  install get some ... There are some
16  versions where you can get a HEPA
17  filter stronger than your A/C.
18      UNKNOWN SPEAKER:  Huh?
19      DR. HUDDA:  They work.
20      UNKNOWN SPEAKER:  It looks like
21  a dehumidifier.
22      UNKNOWN SPEAKER:  I want her to
23  tell me exactly what she is talking
24  about. We have all have stand-alone
25  HEPA filters, etc. What I am

1
2      DR. HUDDA:  I think that is a
3  big community concern- [crosstalk]
4  whether or not that would be
5  effective. But that is a demand I
6  think ... something that should come
7  from the community not from a
8  researcher. I don't think whether or
9  not this would work.
10      UNKNOWN SPEAKER:  That's what
11  I'm asking you in terms of
12  effectiveness. People who are very
13  close to an airport ... would
14  benefit ... from it.
15      DR. HUDDA:  Yeah. In my
16  scientific opinion, yes if you --
17      UNKNOWN SPEAKER:  By how much?
18      DR. HUDDA:  Depends on the
19  efficiency of the filter that you
20  are installing. Also, the walling of
21  your house has to be all stated out.
22  It has to be a proper installation,
23  just small portable units that are a
24  few hundred dollars and you want to
25  turn them on in your bedroom. Let

1
2  interested in what would have to be
3  done to protect the people who live
4  near the airports.
5      DR. HUDDA:  If you put out a
6  filter whether it is a standard one
7  or a window unit or a central-
8      UNKNOWN SPEAKER:  Central air.
9  Okay.
10      DR. HUDDA:  It would definitely
11  have ... cut down your secondhand
12  air pollution. In respect to whether
13  you live near an airport or highway.
14  That is by design that there are
15  risks applied to it.
16      UNKNOWN SPEAKER:  So we are
17  talking about 50 percent?
18      DR. HUDDA:  Yes. I have observed
19  that with some units. So I cannot
20  give you a number because it depends
21  on what the field setting is, what
22  the entrance of the filter is, what
23  the contribution is, what is the
24  leakage of the house.
25      So I cannot give you a number

15 (Pages 54 - 57)

1
2       but I can tell you that you can buy
3       a few hundred dollar HEPA filter,
4       put it down in a room, which I have
5       done many times. In a normal size
6       bedroom, leave it on for a few
7       hours, with all of the windows
8       closed, 50-60 percent keep it
9       running longer and longer and
10      longer. It keeps cleaning the air,
11      keeps cleaning the air, keeps
12      cleaning the air. You are going to
13      get a 90 percent reduction.
14           UNKNOWN SPEAKER:  Okay. I guess
15      I was looking for whether or not you
16      had done studies like this thing in
17      Boston since you picked Boston --
18           DR. HUDDA:  No, nothing, nothing
19      like --
20           UNKNOWN SPEAKER:  Nothing like
21      Boston?
22           DR. HUDDA:  This is a whole
23      house ... vacation ... older house.
24      I haven't done that. We have done a
25      whole bunch of refrigeration trials

1
2       ventilation system and for those
3       HEPA system filter, if the system
4       will allow it. That would normally
5       take care of a big portion of the
6       situation. Thank you.
7           UNKNOWN SPEAKER:  Does anyone
8       know what the concern to part 150
9       started. Did they take into
10      consideration air filtration systems
11      or is it just simply soundproofing?
12          MR. SCHREIBER:  What is the
13      question?
14          UNKNOWN SPEAKER:  The part 150
15      service. Did they take into account
16      the other filtration systems or
17      simply soundproofing?
18          MS. BROWN:  ... 150 studies did
19      not deal with air pollutants, or air
20      pollution.
21          DR. HUDDA:  Thank you.
22          MS. BROWN:  So I want to thank
23      Neelakshi for her presentation. I
24      think it was enlightening for a lot
25      of people. We didn't ask her here to

1
2       so they could see the standard round
3       units and they have seen benefits.
4           UNKNOWN SPEAKER:  Right. Thank
5       you.
6           UNKNOWN SPEAKER:  Well, if you
7       have school constructions that are
8       given to build X-amount of schools
9       because I'm on the Board. You
10      mentioned about ... school
11      constructions that have X-amount of
12      schools to be built in southeast
13      Queens. We may go in and go back and
14      address ... she said Ikner building.
15      Something like that.
16           UNKNOWN SPEAKER:  That they take
17      another look, even come across some
18      more money. The type of building
19      that the school they are about to
20      build. So we attack that problem
21      right now. I think that is something
22      we should read with the powers that
23      be.
24           DR. HUDDA:  Something that is
25      cheaper to just upgrade the

1
2       tell us what to do. It's to provide
3       food for thought so when we go back
4       into our airport committees, we can
5       start talking about, "Well, what
6       kinds of things should we be looking
7       for? What kinds of things should we
8       be asking for?"
9           We're trying to bring you today
10      some objective information that is
11      not coming from the powers that be,
12      let me just put it that way. So if
13      you have other questions or very
14      specific questions that had not been
15      answered, please send them to Lauren
16      and to me and we can put them
17      together and send them on to
18      Neelakshi. And maybe we need to get
19      some other people in here to also
20      talk about the same topic from
21      different perspectives.
22          The next person, who is
23      bringing us some information, is Dr.
24      Tae Hong Park, who is going to talk
25      about the state of the art, eight

1
2  one sensor networks for automatic
3  airplane noise detection and
4  tracking.
5      So a lot of times we're talking
6  about the 65 DNLs and people
7  complaining that that just is an
8  average, which is true over the
9  year. And how can we know exactly
10  how much noise is over our heads?
11  How can we know what the decibel
12  levels are that are flying over us?
13  And this is a field that Tae Hong
14  has been working on.
15      So we asked him to come down and
16  talk about some of his work. As you
17  can see, he is from NYU and he's in
18  the music department, but there's a
19  whole technological piece there.
20      So Tae Hong.
21      DR. TAE HONG PARK:  Thank you so
22  much. Good evening. How's everyone
23  doing?
24      Audience:  Good.
25      DR. PARK:  Subway was a little

1
2  jammed. That's a different problem
3  for a different evening discussion
4  but I wasn't missing. As for
5  [crosstalk], I am going to talk a
6  little bit about mapping tracking
7  and airplane noise. And I'm coming
8  from NYU and I am in the music
9  department. It's kind of an
10  interesting situation I'm in. So my
11  undergraduate degree was in computer
12  science and electrical engineering.
13  In grad school was in sound
14  recognition using AI machine
15  learning and rural network, and
16  stuff like that. I did my PhD at
17  Princeton.
18      So half of my thesis
19  dissertation was in composition,
20  half of it was in automatic
21  recognition of musical sounds. So
22  the texture of sound, what is sound
23  A, what does sound B, how can we use
24  machines to recognize and classify
25  those automatically has been sort of

1
2  my field of interest and also I'm a
3  bassist too. Very nice. So let's
4  move along with this.
5      So in particular I'm going to
6  talk about measuring, scaling and
7  understanding, which is very
8  important. I'll sort of wrap my talk
9  around those things that are
10  modules. So as we know, and I won't
11  go too much into detail about the
12  noise pollution that exists and the
13  DNLS and all that stuff, but I'm
14  happy to decode that and unpack that
15  as necessary. But [inaudible] knows
16  pollution is a global issue, right?
17  With big cities becoming a mega
18  cities.
19      So as we know in 2015
20  approximately, there was a turning
21  point, where we have 50 percent of
22  the entire population to get to
23  these big cities. So that was
24  interesting for the Boston nation
25  and by 2050 it is projected to be

1
2  around 7 percent so as more humans
3  gather and gravitate towards the
4  mega cities, we have more machines,
5  more people.
6      And naturally in some ways more
7  pollution and noise pollution is one
8  of those things that is interesting
9  because for example, like your
10  vendor, like two minutes later
11  you're like, what noise?
12      Right? So transient response. So
13  it sounds like Google maps where the
14  Google street view where the
15  sampling rate is once every year,
16  right? Cause buildings thankfully
17  don't collapse overnight unless
18  there's some interesting events
19  going on.
20      So the sampling rate of audio is
21  actually 44,100 per second. And
22  that's because I would give you
23  something that's sensitive but for
24  video to about 60 frames per second.
25      And that's a lot of data too.

17 (Pages 62 - 65)

1
2      But that's one of the reasons that
3      sound is maybe interesting and
4      problematic and you can see it. We
5      cannot smell it, we cannot touch it,
6      but it's there and we know it is
7      there points. Then we love airports.
8      I fly all the time.
9         So it would make me a hypocrite
10     to say that we don't need athletes,
11     you need them. But I think there's
12     ways to perhaps improve the
13     situation. That starts with the idea
14     of looking at hard data. Everyone
15     can agree on a knows. We all know,
16     or there's basically a lot of
17     studies have been done in academia.
18        Research and all that stuff is
19     really great because as I said, it's
20     a global phenomenon. Cardiovascular
21     diseases for the activity of
22     children's parents keep inflation,
23     property devaluation, so on and so
24     forth.
25        But this is basically common

1
2         And as a matter of fact in
3      particular, what interests me is
4      airplane noise as its most annoying
5      transportation noise that is known
6      to humankind. There are UFO's out
7      there too, but those types of sounds
8      I haven't heard yet.
9         So I'm working on that part. And
10     so to sort of unwrap and sort of
11     give you a view of what we're doing,
12     is that one very important part of
13     our project and research is data,
14     like data that everyone can look at.
15     Can say a 1 is a 1, a 2 is a 2 and a
16     1.5 is a 1.5 so that's what we are
17     trying to do. And why? Why is that
18     important?
19        Well, you can't fix what you
20     can't measure, right? So that's
21     where you need to start then the
22     area of big data. A lot of data is
23     needed to make an informed spatial,
24     temporal informative analysis of the
25     situation can just go there, measure

1
2      sense. Where you don't really need a
3      research study to understand this,
4      for example, let's say you have to
5      get up at 7:00 AM, probably 6:00 AM
6      for most people, and you have to go
7      to school or you have to take your
8      kids to school or whatever.
9         And let's say that you go to bed
10     around 10:30. What happens when
11     there's an airplane that flies over
12     at 11:00 PM, when you're about to
13     sleep? If that happens every day for
14     a week, for a month, for a year?
15        Obviously, you will get messed
16     up and the next day will be
17     miserable. If I can't sleep well, I
18     get really, really grumpy the next
19     day, usually my cat is not happy
20     either. So it's really not that
21     difficult to imagine how that can
22     affect many dimensions of your daily
23     activities and as a long term sort
24     of a problem that gets amplified and
25     becomes a serious problem.

1
2      for an hour well actually for a week
3      and say, 'Oh that's what's
4      happening.'
5         It changes week by week, day by
6      day. When it snows, it's different.
7      When it rains it's different, when
8      there's wind it's different. Every
9      year things change. So it has to be
10     a dynamic and continuously evolving
11     analysis. So bigger data is better.
12     And in the area of big data, this is
13     very timely.
14        And so this is essentially the
15     research we do is it's not just
16     constant [inaudible] it's actually a
17     sign with the times. It makes all
18     the sense. And seeing is believing,
19     so let me put it this way. If I
20     think, although I'm not, I'm also
21     position if you asked me whether I
22     would rather lose my hearing or
23     eyesight would say hearing. So if
24     you, a picture is worth, how many
25     words is it?

1
2      AUDIENCE:  A thousand.
3      DR. PARK:  A thousand words is
4  it? A video is probably worth a
5  million words, okay so movies and
6  working pictures and animation is
7  king of the day, and we watch, does
8  anyone not watch YouTube?
9      AUDIENCE:     (Laughing.)
10     DR. PARK:  That is basically it
11 is a sign of how culture is changing
12 and evolving because we see data and
13 we can sort of look or extract
14 patterns pretty easily.
15     So seeing and hearing is pretty
16 great and so data is very important
17 and communities are the most
18 important. That's why I'm here, to
19 talk to you guys and get some ideas
20 from you. And in one aspect you
21 can't measure what you, erm you
22 can't fix, what you can't measure,
23 but you also have to measure at the
24 source, which is where people live.
25     I can't really do it in the

1
2  is believing, which helps you
3  understand, educate yourself educate
4  others and then act on that type of
5  data that can have I cannot produce
6  insightful and reasonable mitigation
7  policies and strategies.
8      This is sort of a picture I drew
9  as to how our system works. We have
10 the sounds in the community. You got
11 the cloud to archive and to preserve
12 the data, visualize, look at the
13 data share it with the community,
14 and then this comes full circle. So
15 that's look like diagram I like to
16 always show, but everything starts
17 with you can't fix what you can't
18 measure.
19     And this project started in
20 academia in 2011 actually, it's been
21 a while and it's nine years of
22 research and development, over 25
23 locations, patent applications. And
24 currently we are actually
25 transitioning from the ivory tower

1
2  ivory tower and I live in the ivory
3  tower in this pretty miserable land.
4  Just kidding. It's actually pretty
5  nice.
6      So you've got to measure it at
7  the source and you got to get the
8  community involved and you'll see
9  how that plays a role in designed
10 philosophy and instructions that
11 we've sort of come up with and we're
12 working with Barbara and some folks
13 in Chicago and in Cologne in Germany
14 and [inaudible] and all these other
15 places so you can't fix what you
16 can't measure, and measurement at
17 the source.
18     Bigger data is better, scaling
19 and adaptability, you've got to do
20 it a lot for your time and space.
21 You can't just have one bite here
22 and one bite there, record for a few
23 hours and be done with it, that's
24 just nothing and that's not the way
25 it works. I think at least, seeing

1
2  to the streets so to speak.
3      And bringing down from a
4  research sort of perspective and
5  trying to get people involved and
6  get it to the people. It's a sort of
7  project for the people, of the
8  people, by the people type
9  mentality. And that's what we are
10 doing right now.
11     This is one of the early
12 prototypes to explain what all these
13 things are, but basically this is a
14 sensor. It's called a sticker
15 sensor.
16     Does anyone know how to put
17 stickers on a window?
18
19     Yeah. It does. Does anyone know
20 how to put a plug in to the
21 electrical outlet?
22     AUDIENCE:  No.
23     DR. PARK:  Yeah.
24     AUDIENCE:  No.
25     DR. PARK:  We should talk. Does

19 (Pages 70 - 73)

1
2  anyone know how to connect to the
3  home Wi-Fi? That can be complicated.
4  Usually it's because you lost your
5  password. But if you know how to do
6  those three things, then you can
7  basically participate. And I'll talk
8  about that a bit more.
9      Here's the newer version, and
10  Barbara has one of these and she's
11  giving us really good feedback so
12  we're fine tuning it so that... It
13  is for the people, so we're really
14  trying to get some feedback from the
15  users so that we can make it
16  efficient, effective and usable by
17  the people that are in those
18  situations. And this, I should have
19  brought one of those sticker mic,
20  but that's one of the sticker mic.
21      And basically, as I said, you
22  patch to a sticker. And it's very
23  thin. It's basically the size of a
24  credit card. That's also by design.
25  Not that you're spending money, but

1
2  it's a familiar shape for on the
3  window.
4      Does anyone have the window? All
5  this is by design. I'm making a joke
6  of it, but there are probably no
7  mics that you see on my notes
8  attached. So this is... I'm joking
9  but it's not a joke.
10      And what we're doing here, again
11  this noise measurement at the
12  source, where the noise is, this
13  plug-in sensor network. You guys
14  probably remember the plug and
15  plaything, back in the day. This is
16  a plug, it starts sensing type
17  design, high value, low battery
18  data.
19      And I'll talk about that
20  briefly, but essentially it's an
21  intelligence system that tries to
22  differentiate between the boss or
23  the wife screaming at the husband,
24  and sort of neglecting that and
25  capturing the aircraft's screaming

1
2  at you. So it does that
3  automatically and it's inclusive by
4  design as I said, we gave it an
5  accessible window, home wi-fi,
6  electrical outlet. You can basically
7  participate with the turnover that
8  we have.
9      Bigger data is better. Why is
10  this important? Well, it's important
11  because the communities are very
12  large, airports are very large and
13  with the next gen strategies,
14  airplanes actually have a lower
15  approach, and so it goes for a much
16  longer distance.
17      And then the most concentrated
18  aerial highway situation was
19  [inaudible] -- Chicago last year
20  they had like 5 million complaints
21  per year and I thought it was an
22  error, because it was just exploded
23  from 5,000 to 5 million. It must've
24  been some hacking going on. But then
25  I visited ORID and I visited those

1
2  homes and I can definitely
3  understand why that would be the
4  case.
5      And these are just like regular
6  people like me and middle class,
7  maybe even upper middle class, and
8  across the spectrum. As [inaudible]
9  would say, I think what -- said,
10  "Boyce doesn't discriminate." Just
11  affects everyone. Fortunately.
12      So a bigger [inaudible] is
13  better 40 24-7, 365 and in our case
14  with one second resolution, but
15  that's a lot of data. So what we do
16  is we use AI to filter out the data
17  that you don't need. And for
18  example, like every minute or two
19  you get an airplane. Everything that
20  happens in between I actually do not
21  need and you actually don't need the
22  actual recording of the airplane.
23      All you need to have is a tab
24  that says, is it an airplane? What
25  is a DB? DB levels. How much

1
2      confidence do you have that this is,
3      I mean, I play associated data.
4      That's where the AI comes into play.
5      That's only really possible with a
6      big data science as totally a lot of
7      you know how that goes.
8           Okay, here's an actual... Can't
9      really see well. That's not
10     television, but so CA has been
11     leading and what you're creating is
12     the sound maps. So this axis is
13     days, so it was actually beggared
14     over 64 days in the Chicago area.
15     This is midnight to midnight.
16          This is DBA levels, so it's
17     color coded where the red is
18     actually above 70 Dbs, and then
19     different levels of audio and craft
20     noise. There's not just noise and
21     craft noise that happens throughout
22     the day. Sometimes it's like between
23     250 to 300 every day.
24          And also during those times,
25     which is between bedtime and 6:00

1
2           DR. PARK:  So, using that
3      technology, also to... basically
4      analyzing the ad script sounds in as
5      many ways as possible. One is for
6      sound, using our ears. One is using
7      the flight information and
8      correlating as to what airplane is
9      in that area and confirm it. The
10     airplane type, airliner height
11     elevation, longitude, latitude, and
12     speed, so you can sort of pinpoint
13     what is causing it and have data
14     that everyone can agree on.
15          That's sort of what prototypes
16     we're going to be integrating in the
17     system so we have the full time,
18     full analysis situation for
19     identifying airplanes.
20          So, to summarize, automatic
21     airplane noise and detection, and
22     actually noise as an epidemic has
23     been trying to do this in the Ivory
24     Tower, which is great, and we're
25     trying to make it, as I've said,

1
2      AM. So you have those on emergency
3      mandates that, obviously those need
4      to be there, but it's not like
5      airplanes cannot fly around those
6      times. So that's, we recently just
7      get announced some visualizing that
8      it was pretty, pretty breathtaking.
9      I have to say. And I'll share that
10     with you later on.
11          The -- distribution of airplanes
12     during the day, in I think one hour
13     segments. As you can see, it started
14     in the morning, peaks around
15     evening, and then it comes down and
16     midnight basic [inaudible] stops but
17     doesn't completely stop. Below is
18     another visualization of how a
19     typical day in Chicago looks like
20     about voice perspective. The -- it
21     is while remaining above 70, 75 to
22     be the case. Here's a diagram where
23     we do what's called Live Tracking.
24     You guys know Live Track, right?
25          AUDIENCE:  Yeah.

1
2      down through the Ivory Tower, and
3      that's the product name, which is
4      Noisy, I think it's a pretty apt
5      name. So, automatic airplane noise
6      detection, tracking includes TDA, so
7      decibel 8, A rated, but it could be
8      any wavelength because we just do
9      the raw analysis on it.
10          Additional feature detectors
11     like brightness, specter spread,
12     multi-spread, but GPA is captured,
13     date and time of event, latitude and
14     longitude and altitude, that's
15     actually being created right now.
16     Airplane type, and airliner also
17     being integrated, and speed of the
18     airplane, and the distance from
19     specific noisy sensors.
20          That's the very provision I
21     talked about, where you have
22     multiple devices and Noisy's that
23     can triangulate, and also use
24     [inaudible] to flight content, and
25     have as much confidence as possible

21 (Pages 78 - 81)

1
2      in identifying a potential airplane
3      that's waking you up at 11:30pm.
4          Visualizations, you've seen some
5      of those examples. What you can do
6      with a visualization, perhaps Park
7      can talk about that. Basically you
8      can see what's happening with 60
9      second delay over the entire day,
10     and that's recorded, recorded
11     meaning logged, into the system, and
12     accessible by a common web browser.
13         Does anyone use web browsers?
14         AUDIENCE:  Yes...
15         DR. PARK:  They're very
16     important, actually. So what we're
17     trying to essentially do is go
18     toward every noise assessment
19     modification and think the DNL
20     levels, you guys are familiar with
21     the DNL levels, right? Interesting,
22     I think they have been very
23     important in creating contour lines
24     and using those as an annual
25     approximation based on loud noise.

1
2          Interesting reason, but I
3      actually derived from flight
4      patterns and spatial parameters. But
5      those are marvels. They're not, for
6      one thing, they're not very
7      accurate, whatever that means.
8      Meaning, the analysis average over
9      the entire year, which means you
10     will often get [claps] a clapping
11     sound. The clapping sound only
12     happens twice a day.
13         So, that's what we're striving
14     for, it's a community-driven
15     project, meaning that it needs the
16     people to scale it, which brings
17     down the cost because you're not
18     throwing money at it. If you divide
19     the number of sensors by the number
20     of people, there's many people and
21     the cost comes down. Data-driven,
22     it's essential to have an objective
23     and data-driven discourse about
24     this...
25         AUDIENCE:  True.

1
2          DR. PARK:  Otherwise the talk
3      may be about feelings, which are
4      important, but that's really being a
5      proposer, and their feelings change.
6      In this area, data, objective data,
7      is essentially king. So what we want
8      to do is augment existing models
9      with actual measurements and skill,
10     because high level of tenfold and
11     spatial irregularity, rapid scaling,
12     and spatial tenfold valley, so as
13     they say in America, a shitload of
14     sensors, okay?
15         Automation in AI, why is
16     automation important? There's
17     actually a product that came out, I
18     think it's from... I may be
19     mistaken, I think from California?
20     It's a clicker button, have you
21     heard of this one?
22         AUDIENCE:  Yeah.
23         DR. PARK:  So when an airplane
24     flies over your home, click the
25     button. This is awesome, but not

1
2      really [inaudible] It's a great
3      steppingstone towards something that
4      can be helpful, but we don't want
5      you to be clicking away. We want you
6      to be clicking TV channels perhaps,
7      but not, you know, that boy.
8          Adaptable at almost at airport
9      in the community. As I've said,
10     accessible window, electricity, Wi-
11     Fi. That's basically it. And I'm
12     finished a little early. Have any
13     questions or comments?
14         UNKNOWN SPEAKER:  So, as
15     compared to the other device, the
16     indicator noise device for people,
17     spending the whole day pushing the
18     button, how is the data from here,
19     how is that transmitted to the
20     airports, to the FAA, to the
21     operating authority, and what do you
22     see happening to that data?
23         DR. PARK:  That is a great
24     question. We haven't gotten to that
25     stage yet, but basically the data

22 (Pages 82 - 85)

1
2   owned, essentially, by the person
3   that installs air sensors at their
4   homes. So this is a sort of
5   preliminary phase before talking to
6   the FAA and airports where we have
7   to deal with them to have a proper
8   discourse as to what can be done. I
9   think that's essentially what we're
10  working towards, having enough data,
11  more than two data points, but
12  enough data to draw a detailed ... a
13  sound map as to what goes on a daily
14  basis, weekly, monthly in these
15  cases and over many, many years to
16  come so that we can make informed
17  decisions, not decisions based on
18  models.
19      Models are great. As a computer
20  scientist, I love models, but models
21  have a lot of errors. There's no
22  substitute than actual data on site
23  and a lot of it.
24      JOAN:  What's the cost to the
25  homeowner you are anticipating?

1
2       BILL HUISMAN:  Hold on Joan.
3   Hold on one second. Joan, hold on
4   one second.
5       UNKNOWN SPEAKER:  Thank you.
6       I appreciate these presentations
7   this evening because what it does
8   is... It kind of points us in a
9   different direction about how we are
10  informed about noise and air
11  pollution in our communities. Just
12  as you said, Dr. Park, it's not
13  about noise samples, or noise
14  models, or air samples taken some
15  distance away from where human
16  beings actually live, but it's
17  actually grassroots people. You can
18  see how it's actually impacting
19  individual homes.
20      And I feel as though the next
21  step beyond something like getting
22  this research and these statistics
23  is to take a look at the human
24  beings on the ground and see how our
25  children's school performance is

1
2   being impacted in compared to those
3   in non-impacted communities. To look
4   at the health of the people in our
5   communities and see where it
6   compares to that of people who are
7   not in impacted communities.
8       Look at the housing, the home,
9   the values of our homes. Yeah? And
10  then, to make some decisions about
11  mitigation. And just as the Port
12  Authority and the governor have gone
13  out and gotten underwriting from
14  corporations, et cetera, to find
15  ways to redevelop the airport, we
16  need that level of support to
17  mitigate what's going on in our
18  communities.
19      So that's my comment. My
20  shameless plug is the EQA has an air
21  study petition out and we hope that
22  you will take a look at it and sign
23  on to it, asking the governor and
24  our congress people to sponsor
25  comprehensive, independent, air

1
2   quality studies in our communities
3   in ways that matter to the people
4   who live on the ground.
5       DR. PARK:  That's really a great
6   comment and I think it goes to the
7   heart of an issue, which is data at
8   scale. There's a lot of data out
9   there. But compared to the size of
10  planet Earth, and the city, the area
11  that represents the airport
12  community is just like a drop in the
13  bucket. So we want to create a lot
14  of drops and the drops with the
15  sensors in a very low cost argument.
16  I think you asked that question as
17  well.
18      So as you probably know, the FAA
19  has contractors that install these
20  ugly things on the streets and
21  they're very important. But the
22  funny thing is they don't use those
23  to drive the models. You guys know
24  this, right?
25      UNKNOWN SPEAKER:  Right.

1
2      DR. PARK:  Which is also very
3   simply, What? And they cost around
4   $26,000 to $30,000 to install. Ours
5   costs $15,000, just kidding. Ours is
6   around 250 to 300, more or less. At
7   this point, and obviously when
8   things get scaled, it can bring down
9   the cost. So I think it's also much
10  smarter. You're not just measuring
11  the audio, or the DB levels, in your
12  attempt to find which one is the
13  perpetrator, right? Which one is the
14  airplane perpetrator?
15      That's what we're interested in.
16  Then you expand it to other things
17  like construction noise, or
18  [inaudible ], and things like that.
19  But as I said, number one, the most
20  annoying transportation sound is
21  airplane noise.
22      UNKNOWN SPEAKER:  So I just have
23  a question about the tech. One is
24  sort of, in an ideal situation how
25  many units would you need, like in a

1
2   don't have to pay 20,000, 30,000
3   bucks. You pay whatever that is,
4   like 250 to 300, the price will come
5   down when you mass produce it,
6   obviously.
7      Aside from back in the day when
8   you start with the thermometer,
9   right? The Fahrenheit was a genius,
10  right? And Celsius, and all that
11  stuff. But that wasn't like a common
12  thing. So what I'm into doing is, in
13  the not so distant future, we should
14  all have a thermometer that's much
15  more sophisticated than just
16  measuring temperature. PMs, air
17  pollution, radioactivity, perhaps
18  even.
19      This is all data. All you need
20  to add is more sensors to it and
21  that technology has become so
22  affordable and so widespread, but it
23  is actually possible. I think there
24  is, I have to say in some sense a
25  sort of misconception as to what is

1
2   square mile, to get really good
3   coverage? And then, two, have you
4   considered the idea of like not just
5   having a connected to Wi-Fi but
6   maybe using cellular technology to
7   put it into areas like the
8   wilderness or something to assess
9   impact on wildlife and noises?
10      DR. PARK:  Yeah, absolutely. So
11  maybe I can answer your second
12  question and then go back to the
13  first question, which is that, yes,
14  all those things are possible. The
15  thing that always concerns me is
16  cost, right? So if we add a cell,
17  receiver transmitter, then the cost
18  goes up, right? I sort of am a big
19  proponent of utilizing what people
20  already have opposed to asking
21  people to get like XYZ agency, EFG,
22  and then do this. Right?
23      So you have a window, and they
24  have full Wi-Fi with electricity.
25  That's all you need. And then you

1
2   possible with if communities come
3   together and one is not ... I think
4   if I can do it then obviously you
5   guys can do it too, is my opinion.
6      UNKNOWN SPEAKER:  So the
7   question is in the best possible
8   thing, if we have a square mile, how
9   many people in that square mile
10  would have to hook up to make this
11  worthwhile? In other words to make
12  the data more usable and ...
13      DR. PARK:  Right, right. That's,
14  again, a great question. And I think
15  the answer is a bit interesting. So
16  because we have the NextGen flight
17  patterns, it's actually not as crazy
18  as it was back in the day because
19  back in the day we had this sort of
20  fanning approach, right? Now we have
21  this laser approach.
22      So, once you know depending on
23  how the wind blows, where the
24  aircraft land and that switches too.
25  If you actually put it across that

1
2       pathway. So if this is the beam that
3       you have, like let's say 500 meters
4       on either side and then 500 meters
5       between each of these locations.
6       Because they are also symmetrical,
7       you don't have to do it at each
8       side. You can actually do it like
9       here and here because it's like when
10      there's a light beacon from on top,
11      it goes in all directions.
12          So it's actually very scalable
13      and you don't need like millions of
14      sensors. As I said like 250 to 500
15      meters, every 250 to 500 meter
16      depending on the situation. If it's
17      more open, there are buildings all
18      that changes, but it's not that
19      costly to solve it.
20          Just I'll just say this. For
21      example, if you want to install one
22      sensor, that's 30,000 bucks. Let's
23      say this is 300 bucks. I mean, holy
24      macaroni, right? That's the scale
25      that we're talking about.

1
2          UNKNOWN SPEAKER:  Dr. Park,
3      thank you for the presentation. I
4      recently read about a study going on
5      at NYU. It's called Sounds of New
6      York city.
7          DR. PARK:  SONYC, yeah.
8          UNKNOWN SPEAKER:  And I've been
9      in contact with Graham Dove, he's a
10      research assistant professor. The
11      reason why I sought him out was
12      because one of the provisions in the
13      2018 reauthorization bill per the
14      FAA included section 189 which was a
15      study on potential health and
16      economic impacts and overnight
17      overflight noise. And the FAA has
18      given this study responsibility to
19      MIT and Boston University.
20          DR. PARK:  I did hear about it,
21      yes.
22          UNKNOWN SPEAKER:  So, I was
23      curious if NYU was doing this five
24      year study that was very well
25      funded, is there any way it ... Will

1
2       these forces could come together and
3       help each other? Is your study at
4       all connected with the Sounds of New
5       York?
6          DR. PARK:  Yes, actually I ...
7      So before that there was, just a
8      brief history of that. So I came to
9      New York city in 2012 with hurricane
10      Sandy. You guys remember hurricane
11      Sandy?
12          UNKNOWN SPEAKER:  Oh, yes.
13          UNKNOWN SPEAKER:  No.
14          DR. PARK:  No? You guys know of
15      hurricane Katrina in New Orleans.
16          UNKNOWN SPEAKER:  Yeah.
17          DR. PARK:  I went through that
18      as well. So I'm not going to move to
19      another city [crosstalk]. Long story
20      short, I came to New York in 2012.
21      Before that I was at Tulane
22      university teaching there with a
23      great situation with sea levels
24      rising, which is true. It's an
25      inverted bubble, not bubble. A

1
2      fishbowl.
3          It's actually [inaudible]. So I
4      came here and that was actually one
5      of my main projects that I was
6      interested in and sort of testing in
7      New York City. So, that was part of
8      a SONYC team is actually, was part
9      of my team. And then we sort of went
10      our separate ways.
11          As I said, I don't think this
12      should be a research project. I'm
13      like enough research, let's get it
14      out there. So that's where my
15      philosophy sort of changed and go
16      scholar.google.com and there's
17      thousands of studies and we know
18      where the problem is. I don't need,
19      my aim is not to get grants.
20          And I'm a social professor for
21      tenure. So, I'm not doing this
22      because I need to get tenure at the
23      university. I'm doing this because I
24      think it's meaningful. It's
25      interesting and that can help.

1
2      So, I also sort of, my
3   philosophy was getting it to the
4   people, getting it out of the ivory
5   tower, onto the streets. And I think
6   the short answer is we should all
7   collaborate and partner. And so I
8   got some partners over in
9   [inaudible].
10      He's hired a CEO, essentially,
11   and he's sort of he's helping us
12   bring it to the people because it
13   would be a shame if something like
14   this would be left research lab.
15   Because people needed and we can
16   make it happen.
17      UNKNOWN SPEAKER:  Dr. Park, how
18   do you see artificial intelligence
19   actually helping with the excess
20   airplane noise problem that we have?
21      DR. PARK:  I think it's the
22   clicker situation, right? So we
23   don't want the people, the parents,
24   and children, whoever hears it that
25   could be clicking and reporting to

1
2   the authorities that there is
3   airplane noise. I think that's where
4   AI comes into play. Where that's
5   automatically done and the evidence
6   is the data, right? That's the
7   point. AI makes it possible for us
8   to convene, to live our lives as we
9   want you to and not be concerned
10   with airplane noise and tracking it.
11   That's all done automatically with
12   AI.
13      MR. SCHREIBER:  Thank you, Dr.
14   Park. Let's hear it for Dr. Park.
15      MS. BROWN:  As I said, the
16   purpose of this is to give you
17   information about the kinds of
18   things that are going on. Tae Hong
19   mentioned that I have one of those
20   little things in my house. The
21   Eastern Queens Alliance of which is
22   a federation of civics in southeast
23   Queens, we have a small
24   environmental justice grant where we
25   are looking at air pollution and

1
2   noise pollution, and the goal is to
3   see if... where the noise is
4   highest, if the air pollution is
5   highest. And this is just a small
6   citizen science project. So we're
7   not... We need those big studies
8   done that Gloria talked about, and
9   the Jim Hilado is mentioning.
10      But we have a small, a tiny
11   project going on. So one of the
12   things is that we have... I have a
13   beta version of that noisy device,
14   and Tae Hong came to the Alliance
15   and talked about what it does and
16   how it measures the noise. What it
17   gives, it... When I go and look at
18   the grant from the sound, it
19   actually, it tells me of the sound
20   because it shows me the sound going
21   up and down, across, over my house
22   or around my house. It tells me
23   which of that sound is actually
24   airplane noise.
25      So if you looked at the graph,

1
2   you would see these big blue lines
3   going up because it was an airplane,
4   and then you see some other stuff
5   that's not an airplane. So it also
6   tells the decibel levels. And at
7   this point, the only thing, we
8   haven't reported anything to
9   anybody.
10      We're not sending in graphs to
11   the Port Authority office. But just
12   looking at... I have three pages of
13   data just for one day, and I have
14   decibel levels over my... and these
15   are only the decibel levels that are
16   above a certain threshold. So the
17   threshold that was set is 60, 60
18   decibels. But it could be set
19   wherever we want.
20      And just, so I have three pages
21   of data over 60 decibels. And I know
22   that, for instance, over my house
23   from early in the morning from... It
24   starts from 1:00 AM or 12 midnight,
25   83.5 decibels, 74.54, 70.18, 87. I

1
2      can see all the planes that went
3      over and the decimal levels.
4          And from our perspective, we're
5      going to be looking at that as it
6      applies to noise pollution. But it
7      seems like it has... If the
8      technology allows wanting to train a
9      device to pick up airplane noise,
10     and to tell you what that noise is,
11     and then the technology allows
12     integration with other things, like
13     Tae Hong mentioned WebTrack, then
14     that's valuable information for us.
15     So nobody... We're not trying to
16     sell anybody. I'm certainly not
17     trying to sell anything to anybody.
18     We were curious that that technology
19     is out there, and as I said, we have
20     a small citizen science grant where
21     we're looking at that.
22         MS. BROWN: And so the question
23     was asked about how many you need.
24     We're creating a grid across the
25     community. We're planning to do 25

1
2      stations, roughly 20 to 25 stations,
3      gridding a community within a five
4      to 10 mile... 10 miles from the
5      airport, and to see what kind of
6      data we're collecting.
7          For the air pollution, we're
8      using diffusion tubes to look at
9      some of the air pollutants
10     associated with jet engine exhaust.
11     So we'll see where we get. It's
12     only, like I said, it's a citizen
13     science grant, so it's not a big
14     institution that's doing this. It's
15     a community group doing some
16     research. So I did want to share
17     that with you.
18         MR. SCHREIBER: Thank you,
19     Barbara.
20         The next thing on the agenda. We
21     have the FAA. They wanted to do a
22     Northeast Corridor project, and this
23     is something we speak about all the
24     time, the Northeast Corridor. And
25     who do we sets the route?

1
2          MS. BROWN: And then approve
3      people.
4          MR. SCHREIBER: Route. And who
5      else do we have from the FAA? Ralph
6      from the Port Authority.
7          ROBERT NOVIUS: And Dave. Thank
8      you.
9          MARK HOPKINS: Mark Hopkins,
10     Delta Airlines, and co-chair with
11     route on the Northeast Corridor,
12     shortened route.
13         MS. BROWN: Okay. And do you
14     have viewpoints?
15         MR. NOVIUS: Robert Novius
16     [phonetic] with the FAA out of
17     Washington, and --
18         RALPH TAMBURRO: Ralph Tamburro
19     with the Port Authority, and as Mark
20     said, fully with the Northeast
21     Corridor.
22         MR. NOVIUS: I'll start. So good
23     evening, everybody. I know it's
24     getting late into the evening and
25     thank you for giving us this

1
2      opportunity to share some
3      information. I think we can get
4      through our stuff in about 15
5      minutes. Great presentations
6      tonight. You're now hearing from the
7      first speaker who's not a doctor
8      tonight.
9          So Northeast Corridor, I know
10     you some of you are probably
11     familiar. Started about three years
12     ago. Started with a body called the
13     NexGen Advisory Committee.
14         The NextGen Advisory Committee
15     gives independent advice and
16     recommendations to the FAA on how to
17     implement NextGen, and I want to say
18     right off the bat that NextGen is
19     multifaceted. There's a lot of
20     aspects to NextGen. It is not just
21     about flight paths that are
22     satellite-based navigation with a
23     narrowing of flight tracks. There's
24     all kinds of aspects of NextGen.
25         And the Northeast Corridor

1
2   touches on a lot of the other
3   aspects of NextGen, but because this
4   is a noise body, we're going to just
5   talk about what we're doing with
6   NEC, Northeast Corridor, that has
7   the potential to change flight paths
8   in our own city.
9       So started three years ago, like
10  I said. The NEC committee approached
11  the FAA and said, "NextGen has a lot
12  to offer. There are capabilities we
13  could do that we haven't been able
14  to do before." Why not take it,
15  emphasize it, and focus it in the
16  Northeast part of the U.S. where we
17  arguably have the most congested
18  airspace in the world, and the most
19  challenging airspace. It's in large
20  part due to New York City with three
21  large airports, very close
22  proximity. Teterboro also being a
23  big factor. Philadelphia right down
24  the road, and all the other major
25  cities in the Northeast Corridor. We

1
2       MR. NOVIUS:  So what are the
3   objectives? Operate the full
4   intended operation. Your borough
5   president shared some sentiments
6   about being delayed when she flies.
7   The full intended operation is
8   essentially, hey, everybody that's
9   scheduled to depart and arrive that
10  day, that it actually happens, and
11  there's not a cancellation. Operate
12  on time, operate predictably. So,
13  there's so many connecting flights.
14  The system is so interrelated that
15  operating predictably helps in a
16  fast, in a major way.
17      Try to get more throughput
18  through our airspace. The airspace
19  on the Eastern Seaboard is very
20  constrained. You might think that,
21  well, we have all that ocean out
22  there just off the East Coast. So
23  there's a lot of airspace that we
24  could be using. But in the fact, a
25  lot of the airspace, in fact almost

1
2   define it as DC to Boston. But a lot
3   of the focus has been New York,
4   Philly. And from an air traffic
5   delay standpoint, 50 percent of the
6   ways can be traced back to this
7   area, this part of the country.
8       So it's not just a regional
9   thing. Because when a flight's
10  delayed, say here locally, that
11  propagates throughout the system,
12  and so other parts of the country
13  are impacted by the flight delays
14  that happened in this congested
15  airspace. So that's part of why the
16  NAC said, "Hey, focus on the
17  Northeast, and you could lift the
18  entire system up if we can make some
19  headway." And that's what we're
20  endeavoring to do. And Ralph, you-
21      RALPH TAMBURRO:  You got it --
22      MR. NOVIUS:  Yeah, but I want
23  you to jump in wherever you feel the
24  urge.
25      RALPH TAMBURRO:  Sure.

1
2   all airspace up and down the East
3   Coast that is offshore is operated
4   and possessed by the military for
5   special operations, and security
6   reasons, and such. So we really are
7   pinned into to either right on the
8   coast or well offshore. And we'll
9   show a little bit of that in a sec.
10      I want to point out the third
11  but also one of the objectives is
12  look for initiatives that are good
13  for the environment that are noise
14  mitigating initiatives. And we have
15  one to show you here in a few
16  minutes.
17      MR. HOPKINS: Okay. If I could
18  just add to that, and we've said it
19  with different briefings. Every time
20  we look at a procedure, one of our
21  main concerns is the impact of
22  noise. You know, we believe in the
23  New York area that next gen
24  technology can actually improve the
25  noise situation, not the grid. You

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1
2  know there's a misconception that
3  there's a lot of NexGen in New York
4  and there is not.
5      Okay. I can tell you from
6  experience there's very little next
7  gen technology being used currently.
8  We're looking to advance that and
9  actually improve the noise
10  situation.
11      MR. NOVIUS:  Northeast Carter is
12  not an airspace and procedures
13  project that maybe some of you have
14  become familiar with over time.
15  There are components that have to do
16  with flight path changes, some
17  airspace reconfigurations that could
18  change where we put aircraft. But it
19  also involves initiatives that are,
20  we call it tools, tools to help us
21  condition flows, meter traffic.
22      I allocate delays throughout the
23  system in a more organized more
24  manageable manner. There are
25  tactical initiatives. The vast

1
2  majority of delays are weather
3  related and when we use the word
4  tactical in the FAA, we talk about,
5  okay, we got a weather situation.
6      It's starting somewhere over
7  central Jersey, so how are we going
8  to respond to that? Oh there goes
9  another one off of Atlantic City.
10  How are we going to start rerouting
11  traffic? Those are tactical things
12  that are tough to plan for when you
13  never know how the weather is going
14  to impact them.
15      Those are tactical initiatives
16  and then the airport infrastructure
17  needs as well. So it's such a
18  challenging environment up here that
19  it was quickly obvious that we
20  needed a suite of solutions. We
21  couldn't just zero in on one of
22  these areas and not the others.
23      So this scope ... we have over a
24  hundred milestones, things you
25  intend to do or have already done.

1
2  That's in all four of these general
3  areas. There's a little scoreboard.
4  This gives you a sense of how deep
5  we're into it, so there are FAA
6  milestones, there were industry
7  milestones when the reasons Mark
8  standing up here with me.
9      We are partnered with industry,
10  the operators of the airspace,
11  airport authorities like Ralph and
12  other airport authorities within
13  this domain and a lot of the
14  milestones when we say, "Oh, we're
15  going to do something," that doesn't
16  mean there's going to be a change
17  that you're going to notice. Some of
18  these are like stretch goals where
19  we're trying to develop concepts to
20  see if something is feasible and
21  then if we get some traction that it
22  is feasible then to take next steps
23  that actually make it a reality.
24      Some are that some are actually,
25  "Hey, we're changing the system." So

1
2  I'm going to run quickly through
3  what five plan changes are
4  associated with this work. Either
5  that just happened or soon to happen
6  and even though somebody may say,
7  "Well, why is he showing me this?
8  That's not really over Queens." It's
9  just if you hear this, Northeast
10  Carter is changing these roots in a
11  big way. I want to give you some
12  background so you don't think, "Oh
13  that's why I'm hearing noise because
14  if some of these changes to have
15  nothing to do with local traffic,
16  but others do."
17      So probably the most significant
18  one is a change to what we call our
19  Nathan's Goldman departure. This is
20  LaGuardia runway 13 departure
21  procedure. It is often used in
22  conjunction with the tennis
23  departure procedure. Except tennis
24  comes off on 13 and makes a left
25  turn. Nathan and Goldman's makes a

1
2  sharp right turn and essentially
3  points the aircraft towards flushing
4  and its climb up. What we're
5  endeavoring to do here, and this is
6  not an advantage to the airlines or
7  to assist them in traditional ways.
8      This is really a noise mitigator
9  and to try to get this design closer
10 to the way it was intended when it
11 was first put in and it's to move
12 aircraft away from flushing closer
13 to the van wait closer to the port.
14 And this is what we hope to put in
15 may.
16     So just a few months out.
17 There's a Google maps picture of
18 what it looks like. So we're not
19 nudging the track very much because
20 we can't, we have to get the
21 aircraft up to certain altitude
22 before they can begin their life
23 term. But if you look at this
24 graphic you can see this is what we
25 would expect to happen in Maine.

1
2  satellite based procedures that they
3  concentrate tracks over communities.
4      We can also, here's an example,
5  we can thread the needle where we
6  can concentrate the track where we
7  want it. Like over a loud highway. I
8  think I have one more zoom down shot
9  showing you this because there are
10 tweaks to the route further
11 downstream. So there's no way we can
12 make any change where everybody
13 wins.
14     So there still be some
15 adjustment stamps scream where some
16 residents might, might see the track
17 nudging more in narrative direction.
18 When you're airport like LaGuardia
19 surrounded by amazing of people.
20 It's just, it's just tough to do
21 anything without there being some, I
22 don't want to call them mega bases,
23 some impacts, or pluses and minuses.
24     We're trying to... While we know
25 we can't do something that just

1
2  That flood tracks would slide
3  directly over the bandwidth and
4  closer to the product and away from
5  flushing on the order of 1700 feet
6  laterally when these aircraft are at
7  very low altitudes departing and
8  making some of their largest noise
9  impact.
10     MR. HOPKINS: So if I could just
11 add on this one, this one came out
12 of department 50 study and actually
13 was a community recommendation. We
14 pulled it in to the NEC because we
15 sort of value when we felt we could
16 ha we can implement quicker than
17 department 50 study. So I just want
18 to say thanks to the FAA for taking
19 this on and bringing it to fruition.
20     MR. NOVIUS: Just a couple more
21 pictures to give you a sense of how
22 it looks. So there, you can clearly
23 see the park and directly has a
24 little bit [inaudible]. So, while
25 there are rumblings about these

1
2  helps everybody across the board,
3  we're trying to be more equitable.
4  If we can get more aircraft to fly
5  right turn, every airplane that
6  takes this procedure perhaps
7  wouldn't take the tennis, so it
8  would get a little bit of an
9  equitable trade off.
10     MR. HOPKINS: I'm going to move
11 up. I think we'll move off this one,
12 Lester, any questions on this?
13     UNKONWN SPEAKER: So this is
14 going left you're saying, and this
15 is going right?
16     MR. HOPKINS: Yes. Ten comes
17 straight out off the runway and
18 makes a left.
19     MR. NOVIUS: This one didn't
20 actually last fall. There's no way
21 anybody could have detected a noise
22 difference unless you do a lot of
23 shipping out in the offshore waters.
24 These red boxes you see on here
25 these, we call them warning areas.

30 (Pages 114 - 117)

1
2  This is the airspace the FAA
3  sterilizes for military use.
4     MR. NOVIUS:  So it gives us now
5  a Kardos between the warning areas
6  to funnel traffic in and out. So
7  traffic that is going to be out over
8  the water is going to be going to
9  and from South America, the
10  Caribbean, sometimes Florida, and
11  sometimes when the airspace is
12  constrained up and down the Eastern
13  seaboard, operators can kick out
14  offshore to get around that
15  constraint and make use of this
16  airspace.
17     So it behooved us to make this
18  airspace more efficient so we can
19  get more aircraft through it and
20  encourage more aircraft to fly all
21  this way when it's helpful to do so.
22  We made a major change, it was
23  implemented in October of last year,
24  and it allows us to get more
25  aircraft in and out of that type

1
2     MR. NOVIUS:  So, I started out
3  with a laser focus on La Guardia and
4  something very close to the ground.
5  Then I went offshore to show you
6  what we changed. Probably the
7  biggest flight track change in the
8  Northeast Carter has to do with
9  something that we're calling our
10  East coast satellite based high
11  altitude groups.
12     I showed you this because when
13  we turned this on, you can become
14  aware of it some way. It may be on
15  the news, you may hear about it at
16  Northeast Carter, why didn't nobody
17  talk to us about it? Here we are
18  talking to you about, it's actually
19  a change in root structure that
20  stretches from San Juan, Puerto
21  Rico, all the way up to Maine. So
22  it's the entire East coast.
23     It's really being driven by
24  what's happening in this part of the
25  country. It gives us the ability...

1
2  funnel between those warning areas
3  in Eastern New York.
4     MR. HOPKINS:  Hey Rob on this,
5  we're talking noise here, but the
6  first presentation was on missions,
7  and we've seen with these new
8  routes, a dramatic increase in
9  folding on the ground. When you can
10  get through that funnel by using
11  these routes we're reducing
12  emissions by [inaudible] --
13     Thank you for that, Rob.
14     You know there's so many aspects
15  to look at because the system has...
16  There's so many variables involved.
17  You make one change and yes, there's
18  a chance for some unintended
19  consequences, but a lot of times
20  there are other tangential benefits.
21     Robert's pointing out one, if
22  you're waiting on the taxi-way a
23  shorter duration, then you're
24  admitting less pollutants. So that's
25  a good example of that.

1
2  These are high altitude satellite
3  base rate changes and helping us
4  develop tightly packed parallel
5  routes that are not dependent on
6  ground based navigational aids, like
7  our old legacy routes used to be,
8  and develop an entire route
9  structure.
10     When you get up into the higher
11  altitudes, it's tough to change
12  routes, saying that New York, New
13  Jersey, Maryland area and then just
14  saw it off because if you're going
15  to build two live routes and there
16  has to be connectivity to something,
17  right?
18     If you try to connect them to
19  the old routes, it makes the system
20  inefficient. It's almost like once
21  you start it, you got to just carry
22  it through until you fall off the
23  edge of your airspace. And that's
24  essentially what we did here.
25     The Southern portion is in, but

1
2      I am in on the base on out here . On
3      November 5th of this year, all these
4      new Hal tube routes from Maine all
5      the way to San Juan won't be turned
6      on. Some people call this the
7      Atlantic coach routes project. When
8      you hear that happening, that's what
9      this is. None of these route changes
10     involve changes below 24,000 feet.
11     We don't expect any kind of noise
12     impact from them.
13         They're showing you what that
14     was. Do you want to see a real
15     cluttered map? On the green is the
16     new satellite based high altitude
17     groups. Some of them are offshore,
18     but some of them are up and down the
19     East coast. What we hope you'll
20     experience when this goes in is when
21     you find yourself... So being less
22     of a chance of encountering a delay,
23     it's going to help our system be
24     more efficient.
25         Any questions on that?

1
2      part in some of the [inaudible] to
3      those offshore routes will take you
4      out of the water quicker than they
5      do today. So there is some benefit,
6      but Nathan's and Goldman's primarily
7      is a noise improvement.
8          MR. HUISMAN:  I know we're
9      running out of time, but any
10     questions from the group on this
11     presentation.
12         All right, thank you very much.
13         MS. BROWN:  So when moving
14     closely to closing. Just a reminder
15     to those of you who are stakeholders
16     of JFK Airport the EA for the $13
17     billion JFK redevelopment project is
18     out. The comment period ends
19     February 7th. This week there are, I
20     want to call them, well I'm using
21     the term workshops but they're not
22     really --
23         Information sessions going on.
24     There was one tonight. Obviously we
25     wouldn't be at that one, but there

1
2          So with everything we're doing,
3      we brought these [inaudible] public,
4      at public meetings. There's
5      websites, if you want to look at all
6      104 milestones, you can go and
7      peruse those. We could furnish them
8      to make it more convenient for you.
9          That's it.
10         MR. SCHREIBER:  Thank you,
11     Robert.
12         MR. HUISMAN:  Okay, thank you
13     very much.
14         MR. SCHREIBER:  That's okay. So
15     my question was... All of these
16     changes with the exception to the
17     Goldman's and the Nathan's, they
18     don't involve noise mitigation at
19     all. They're going to involve
20     efficiency of routes, maybe planes
21     being on time, but they're not going
22     to involve noise mitigation except
23     for the Nathan's and the Goldman's,
24     is that correct?
25         MR. NOVIUS:  Yes, for the most

1
2      are two more. So if you haven't gone
3      to any, please do. If you have not
4      read the EA and you are representing
5      someone whose constituency is
6      impacted by JFK, you should read it
7      and make your comments by February
8      7th. And if you were at the last JFK
9      meeting you saw it was a thick
10     binder of the EA is 300 and some odd
11     pages. So if you haven't started
12     reading it yet, you need to do so.
13         So that's the only thing coming
14     out of the JFK Airport committee at
15     the moment.
16         MR. SCHREIBER:  Right. And the
17     only thing really major coming out
18     is that Nathan's and Goldman, that's
19     going to have a big, big impact on
20     us and also we're pleased to report
21     that the Throgs Neck helicopter
22     route, that's going to basically
23     become permanent. They've gone
24     through the test period and that has
25     made a big difference in people's

1
2  lives because it's actually cut in
3  half the helicopters that go over
4  their homes the ones that are coming
5  from out East.
6      Do you have a comment?
7      UNKNOWN SPEAKER:  Yeah.
8      MR. SCHREIBER:  And we'll move
9  on to public comment.
10     UNKNOWN SPEAKER:  Any comments
11 from the public? If not I guess we
12 have a motion to adjourn?
13     MR. SCHREIBER:  No. At this
14 point we --
15     UNKNOWN SPEAKER:  Oh. We have
16 [inaudible] making a comment.
17     UNKNOWN SPEAKER:  Yeah, I'm
18 making a comment. I wanted to stress
19 the agenda item number two five or
20 something like that. Second, fifth
21 one, the nine core [inaudible]
22 questions regarding the
23 reauthorization act. That needs to
24 be that the FAA is going to address
25 at the April 22nd meeting. If you

1
2  study. So what my question is as
3  with any budget season, what's the
4  plan to have this legislation
5  reintroduced with funding attached
6  to it while we're in the budgeting
7  process?
8      MS. BROWN:  We don't have that
9  information. So right now we don't
10 have that information, but we will
11 take it back and the next JFK
12 Airport committee meeting is on
13 March. It's the first Monday in
14 March.
15     MR. SCHREIBER:  March 2nd.
16     MS. BROWN:  March 2nd. So if you
17 see us after the meeting to refine
18 that question.
19     UNKNOWN SPEAKER:  It's 10
20 seconds. I'm sorry I didn't have the
21 chance before. I'd like to possibly
22 thank [inaudible] and everyone else
23 for that improvement on the Nathan's
24 Goldman of flight and not having to
25 have to wait to go through the

1
2  could submit your concerns or
3  questions to I guess either Barbara
4  or Lauren, then it would... Because
5  they need some time to research the
6  answers to those questions.
7      And if you remember there was
8  very little answers the first
9  presentation we had and it would be
10 really good if you submitted some
11 great questions.
12     TROY ANDERSON:  Sorry. My name
13 is Troy Anderson. I'm a member of
14 community board 14. I was just
15 looking at the detail message that
16 was given out front regarding the
17 [inaudible] bill for the study at
18 JFK and I was just wondering what
19 the next steps are between... We're
20 in budget season when the government
21 releases budgets. Excuse my voice.
22     The government just released its
23 budget $178 billion. I'm just
24 astounded that we can't find a
25 couple of million dollars to do this

1
2  department [inaudible] study, but to
3  actually implement it and listen to
4  the community. Just wanted to go on
5  record as saying thank you very
6  much.
7      MS. HUISMAN:  Thank you.
8      MS. BROWN:  And thank you to our
9  presenters?
10     AUDIENCE:  Applause.
11     MR. SCHREIBER:  Any other
12 comments from the community? All
13 right then. Do you want to move to
14 adjourn? Do some consensus.
15     MS. BROWN:  Adjourn.
16     (Time noted at 9:33 p.m.)
17
18
19
20
21
22
23     * * * * *
24
25

1
2　　　　C E R T I F I C A T E
3
4　STATE OF NEW YORK)
5　　　　　:ss
6　COUNTY OF QUEENS)
7
8　　　　I, JUDEEN M. DENNISTON, a Shorthand
9　Reporter and Notary Public, within and for
10　the State of New York, do hereby certify:
11　　　　That the within transcript is a
12　true and accurate record of the proceedings
13　taken by me.
14　　　　I further certify that I am not
15　related to any of the parties to this action
16　by blood or marriage, and that I am in no
17　way interested in the outcome of this
18　matter.
19　　　　IN WITNESS WHEREOF, I have
20　hereunto set my hand this 11th day of
21　February, 2020.
22
23

24　　　_____
25　　　　　JUDEEN M. DENNISTON

**1**

**1** 50:5 68:15,15
**1.5** 68:16,16
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