THE Y-DNA PROJECT

Quarterly report from Elizabeth O'Donoghue, the society's Group Administrator Together with Report One of the Breifne Clans Y-DNA Project by Joseph A.Donohoe

As the number of participants in our yDNA Project increases, the ability to chart all members in a meaningful way within the constraints of the Journal format becomes more difficult. As a result, we have decided to shift the bulk of our reports into the yDNA link on the Society website, make the material in the Journal brief and focus on highlights of what our most recent discoveries may be. Rod will inform everyone via his periodic emails when an updated chart or other information has been added to the website.

We are awaiting access to a charting method from Family Tree DNA which will allow us to calculate connections as far back as 2000 years with more certainty than we have heretofore been able to obtain, which will hopefully encompass all the participants in the project to date.

We have been researching various websites containing extensive DNA databases to determine evidence of the deep ancestry of the Celtic forebears which were discussed in the last Journal's report. Preliminary results are intriguing, and hint at Scythian (on the Pontic Steppes just across the Black Sea from Turkey) connections – something the scientific community has up to now disregarded as nothing more than myth. There will be more details as our research progresses.

We have found that a yDNA test of only 12 markers, while providing a certain amount of information, is of limited usefulness in establishing clear relationships between participants, and any charting based on such results is not very conclusive. The majority of participants have chosen 25 marker tests, which add a great deal to identifying associations; however, 37 markers can provide a dramatic enhancement to ascertaining tribal connections, hence, we highly recommend that everyone who have not yet obtained 37 marker results contact Family Tree DNA to do so. It will deepen our database and greatly improve our ability to discern the history of our tribal lines and family connections.

Having assumed the general responsibilities of my predecessor, Professor Tom Donahue, I am at a disadvantage in not knowing the family history of most of the participants. I would like to ask you all to take a few moments and email me (elizabethod@eircom.net) with the details of your family and the knowledge you have of your earliest relatives – names, dates of birth/death, where they lived/emigrated, etc. This could help me sort relationships and identify family/tribal groupings. We need to ensure we are working at both the ancient and more recent ends of the time spectrum. I also hope to become more proactive in communicating with new participants and updating them on their individual results.

This month, Joe Donohoe has kindly provided us with a Breifne Clans Y-DNA Report, detailing his research and findings from the Breifne/Cavan participants. He has included a Table 1 of *Participants and Ancestors* and Table 2 of *Comparisons of Selected Individuals with All Other Participants with Test Results at the 37-Marker Level* that we have added to the yDNA link on the website. We hope you enjoy his insights and look forward to further reports in future.

Breifne Clans Y-DNA

Report One

The Breifne Clans Project with Family Tree DNA (website: http://www.familytreedna.com/surname_join.asp?code=T77392&special=True&projecttype=S) now has 34 participants. Kits have been returned for 28 individuals representing 24 families of seven different surnames. These include 14 Donohoe/Donohue/Donahue/O'Donoghue families, four McGovern families, two Faughnan families, and one family each of Clancey, Cragg, McTiernan and O'Rourke. All except three of the 28 kits were tested at the 37-marker level. The comparisons made in this report are mostly confined to 21 of those 25 participants who have received results for the 37-marker test, as listed in Table 1 (available on the Y-DNA area on the society's web site).

These comparisons were made pair-wise by applying Family Tree DNA's FTDNATiP™ calculator (see http://www.familytreedna.com/trs_ftdnatip.html), with the results shown in Table 2. This calculator (launched by Family Tree DNA on 30 Oct 2004) takes into account variance in the mutation rates among the different markers, the first time this has been done by anyone, and was developed at the University of Arizona by geneticists Dr. Michael Hammer and Dr. Bruce Walsh. Applying this calculator yields results in the form of probabilities, for various intervals going back in time, of two individuals having a common ancestor in the male line. To do this, two individuals are picked for comparison, a number of generations is decided on within which the two are probably (or definitely) not descended from a common male-line ancestor, and the calculator is applied. A generation is assumed to last an average of 25 years. I have assumed an average age of 50 for the participants in this study, and accordingly have added this number of years to the three times of interest used here with the calculator (600 years ago, 850 years ago and 1200 years ago) to increase the time intervals to 650 years ago, 900 years ago and 1250 years ago.

The first of these times, 650 years ago, would place a relationship within the period from now back to 1350 AD, when surnames were already well established in the Breifne area. The interval of now to 900 years ago was chosen because 1100 AD is approximately the time of the earliest adoption of surnames in the Breifne area. The earliest time of 1250 years ago, or approximately 750 AD, would additionally give pre-surname connections that would still be within the historical era. The first of these time intervals might be called the clan interval, as individuals showing a connection within it might be expected to share the same surname in most cases. Of course, where there has

been little or no mutation in the set of markers being tested for the two lineages being compared (or where there has been a non-paternity event, or where a new surname has been adopted by a lineage or by a branch of the main lineage) individuals from two lineages of different surnames may be found to be related within the interval. The second of these time intervals might be called the super-clan interval, as individuals from a few different surnames might be expected to show strong connections within it, yet remain unconnected with most of the other surnames in the local area. The interval going back to the third and earliest of the times might be called the sub-tribe interval, as individuals from most of the surnames in the local area might be expected to show definite connections, on the basis of the traditional genealogies (no sure thing!).

We may hope, and even harbor guarded expectations, that soon it will be possible to extend these calculations, with an acceptable degree of confidence in the validity of the results, to the more distant past. It would be of great interest to be able to distinguish the great tribal groupings of early Irish history (the Ulaid, Connachta, Lagin and Éoganachta), to determine whether or not it is possible to characterize a Gaelic ("Milesian"?) group from an earlier Celtic group, a Celtic people from a pre-Celtic people or peoples and to identify Y-DNA profiles for the earliest settlers of eight or ten thousand years ago. Beyond that, there would be the questions of how all these Irish groups connect with broader European groups, what the links might be with pre-Ice Age and earlier settlements in the Middle East following the initial dispersion from Africa across the Suez Isthmus and the Sinai Peninsula, and finally to which of the initial branches they belong as descendants of the murky and ancient, but actual, most recent male-line ancestor of all existing Y-DNA lineages. This person was not a genetic Adam or Noah, because who that ancestor was changed over time, he was only the most recent in a long male line and in his time he was but one man among many, and his male-line descendants were long but one male lineage among many. He could, however, justly be termed the All-Father.

Assumptions of no common male-line ancestor (CMLA) for eight generations (for the 650-year interval) or for ten generations (for the 900-year interval) or for 24 generations (for the 1250-year interval) were made, except in the few cases where a relationship was known. This yields a more conservative estimate of the probability of a CMLA for the interval than would a calculation with a lower number of generations. Using eight generations for the first interval gives results that are slightly more exclusionary but approximately equivalent to the usual assumptions in Family Tree DNA testing, where in the case of the 37-marker test a genetic distance of four or less is regarded as indicating a relationship, and of five as indicating no relationship (i.e. no CMLA), within the approximate time-frame of the use of surnames. Using 24 generations (or about 600 years) for the longer interval is also necessary to get that interval to show up on the computer screen, and is not unreasonable where there is no sign of a closer connection, particularly in comparing two lineages of different surnames. The results for the 99% or greater level of probability are shown in Figure 1.

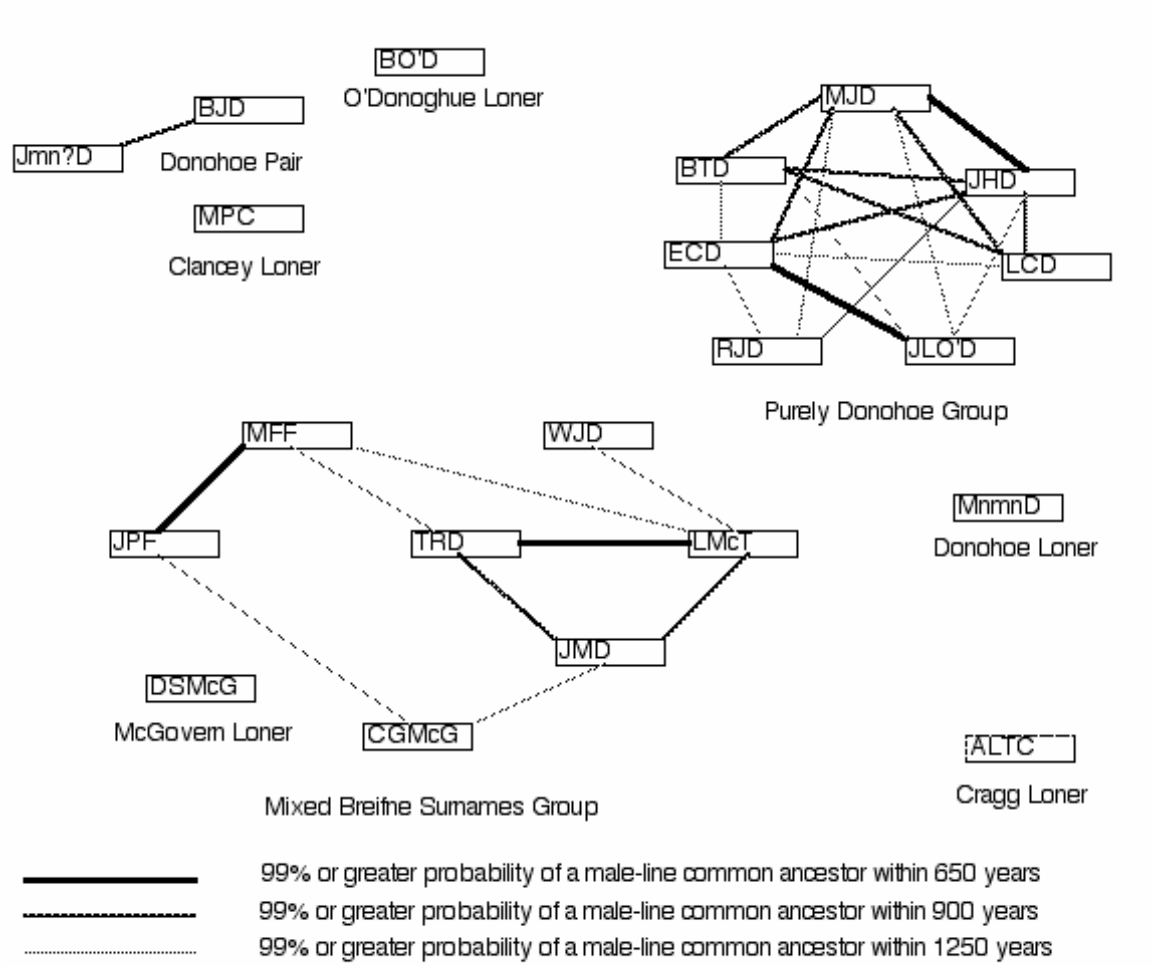

Figure 1

The participants fall mainly into two groups, with several outliers. One of the two groups, more tightly (i.e. more recently) related, is made up only of participants named Donohoe/Donohue/Donahue/O'Donoghue. The other main group, more loosely (i.e. less recently) connected, is made up of participants of a variety of Breifne surnames. Then there are five loners and a Donohoe/Donohue pair.

Relaxing the probability levels to 95%, as shown in Figure 2, does not change the isolation of the two main groups from each other. The purely Donohoe group becomes significantly more tightly connected, as does the group of mixed Breifne surnames, but they sprout no connections to each other. The latter group picks up one of the loners, and the Donohoe/Donohue pair picks up two, including a different surname, to become a small mixed group. This results in three unconnected groups and two loners.

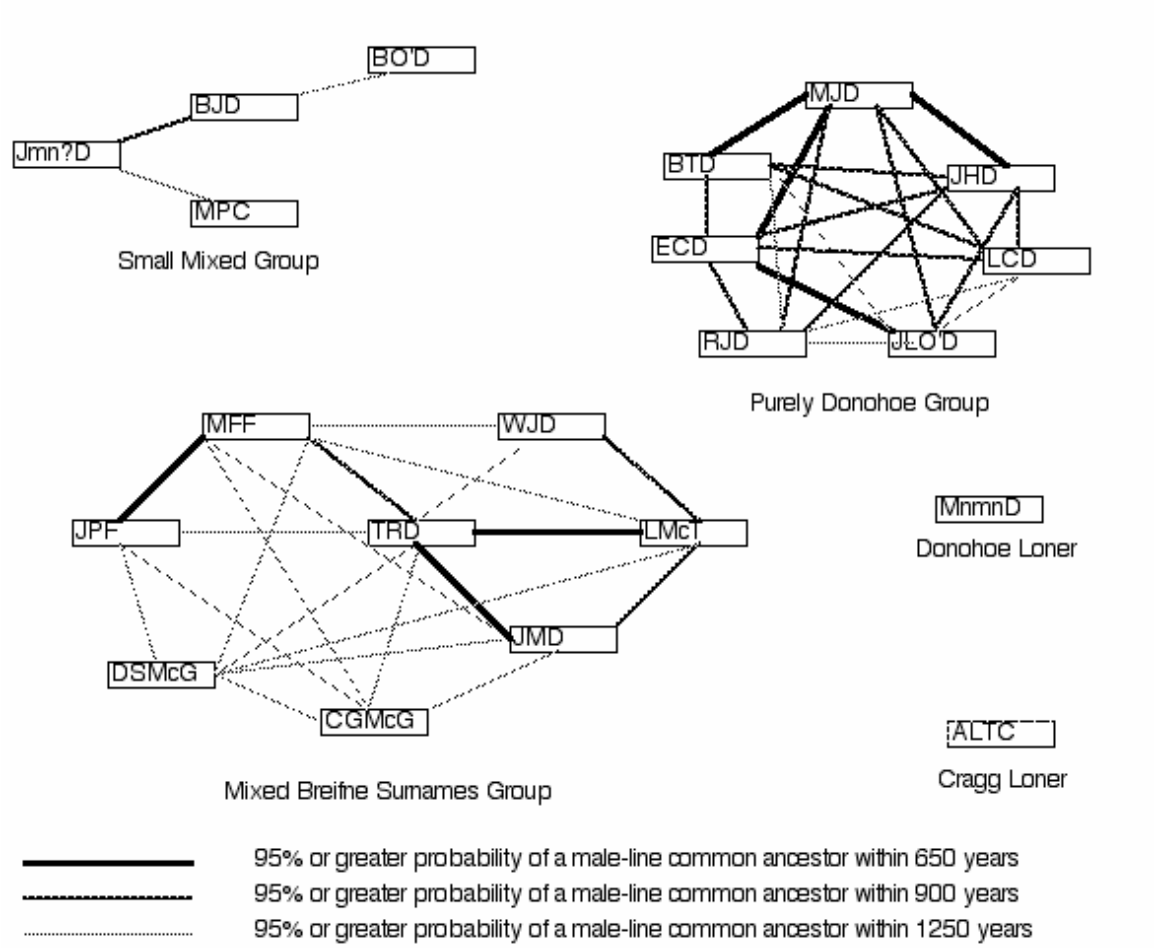

Figure 2

In summary, at these probability levels the results indicate (1) that there were at least four lineages now represented in the Breifne area which adopted the Donohoe surname independently, not by descent from a common eponymous male-line ancestor, and (2) that several lineages bearing different surnames associated with the Breifne area descend from a common male-line ancestor who lived in historical times.

Joseph A. Donohoe
Group Administrator
Breifne Clans Project
8 April 2005

Table 1

Participants and Ancestors

MPC	Clancey, Michael Patrick
ancestor	Roderick Clancy, born 1796, Co. Sligo, Ireland, living ~ 1855 in Chepstow, Ontario, Canada
ALTC	Cragg , Anthony L.T.
ancestor	unknown
JMD	Donahue, Joseph Michael, representing also first cousin Thomas Edward Donohue
ancestor	John Donohoo, born ~ 1756, living 1785 in New Hope, Nelson Co., Kentucky, USA
TRD	Donahue Jr., Thomas Reilly
ancestor	Miles Donahue, born ~ 1716, living 1798 in Killincooly, Kilmuckridge Par., Ballaghkeen Bar., Co. Wexford, Ireland
BTD	Donohoe, Brian Thomas
ancestor	Joseph Donohoe, born ~ 1815, living 1854 in Creevy, Abbeylara Par., Granard Bar., Co. Longford, Ireland
JHD	Donohoe, James Hugh
ancestor	Hugh Donohoe, born 1777 in Derrycassan, Templeport Par., Tullyhaw Bar., Co. Cavan, Ireland
Jmn?D	Donohoe, John (mn?)
ancestor	Philip Donohoe, born 1885, Lavey, Lavey Par., Upper Loughtee Bar., Co. Cavan, Ireland
LCD	Donohoe, Leonard Charles
ancestor	Patrick Donohoe, born ~ 1808 in Ireland, living 1859 in Des Moines, Iowa, USA
MnmnD	Donohoe, Michael nmn (no middle name)
ancestor	Francis Donohoe, born ~ 1815, married 1837, Templeport Par. (of Darraugh in that par.), Tullyhaw Bar., Co. Cavan, Ireland
MJD	Donohoe, Michael Joseph
ancestor	Bernard Donaugho, born ~ 1776, living 1821 in Crosserlough, Crosserlough Par., Castlerahan Bar., Co. Cavan, Ireland
WJD	Donohoe Jr., William John, representing also brother Robert Paul and first cousins Joseph A. and Richard D. Donohoe
ancestor	Patrick Donohoe, born 1793, Co. Cavan, Ireland, living 1826 in New York City, New York, USA
BJD	Donohue, Bernard Joseph (“Brian”)
ancestor	Bernard Donohoe, born ~ 1820 possibly in Clontycarnaghan, living 1860 in Keenagh, both in Templeport Par., Tullyhaw Bar., Co. Cavan, Ireland
ECD	Donohue, Elmer Charles (“Ed”)
ancestor	John Lovet Donohue, born 1841 in Cootehill, Drumgoon Par.,

	Tullygarvey Bar., Co. Cavan, Ireland, married 1865 in Copperopolis, Calaveras Co., California, USA
RJD	Donohue, Raymond Joseph
ancestor	Hugh Donohue, born ~ 1837 in Drummallaght, Killinkere Par., Castlerahan Bar., Co. Cavan, Ireland, living 1860 in New York City, New York, USA
JPF	Faughnan, Joseph Patrick
ancestor	Patrick Faughnan, born 1850 in Cloonfannon, Mohill Par., Mohill Bar., Co. Leitrim, Ireland
MFM	Faughnan Jr., Michael Francis
ancestor	John Faughnan, born ~ 1790, living 1813 in Cattan, Cloone Par., Mohill Bar., Co. Leitrim, Ireland
CGMcG	McGovern, Clovis Gene
ancestor	Bernard McGovern, born ~ 1823 in Ireland (possibly in Co. Leitrim), living 1850 in New Orleans, Louisiana, USA
DSMcG	McGovern, Donald Scott
ancestor	James McGovern, born ~ 1793, emigrated to USA in 1849 from Ballinamore, Oughteragh Par., Carrigallen Bar., Co. Leitrim, Ireland
LMcT	McTiernan, Leo
ancestor	Terence McTiernan, born ~ 1800, resident of Ummeryroe, Shancough Par. (now in Geevagh RC Par.), Tirerrill Bar., Co. Sligo, Ireland
BO'D	O'Donoghue, Brendan
ancestor	unknown
JLO'D	O'Donoghue, John LiPomi
ancestor	Michael O'Donoghue, born 1820, Co. Cavan, Ireland, naturalized 1876 in Lowell, Massachusetts, USA

Table 2

Comparisons of Selected Individuals with All Other Participants with Test Results at the 37-Marker Level

A. 95% or greater probability of a common male-lineage ancestor at 650 years ago or less (25 years per generation), assuming no common male-line ancestor in the last eight generations unless relationship known (known for four comparisons listed here, $P \geq 99.98$ in each case), 37-marker test.

1. William John Donohoe Jr.:
    a. Robert Paul Donohoe 100
    b. Joseph A. Donohoe V 99.98
    c. Richard D. Donohoe 99.98
2. Michael Joseph Donohoe:
    a. James Hugh Donohoe 98.58

    b. Brian Thomas Donohoe 96.27
    c. Elmer Charles ("Ed") Donohue 96.33
3. Brian Thomas Donohoe:
    a. Michael Joseph Donohoe 96.27
4. James Hugh Donohoe:
    a. Michael Joseph Donohoe 98.58
5. Leonard Charles Donohoe:
    a. none
6. Raymond Joseph Donohue:
    a. none
7. John LiPomi O'Donoghue:
    a. Elmer Charles ("Ed") Donohue 99.42
8. Bernard Joseph ("Brian") Donohue:
    a. none
9. Thomas Reilly Donahue Jr.:
    a. Leo McTiernan 99.15
    b. Joseph Michael Donahue 97.85
    c. Thomas Edward Donohue 97.85
10. Joseph Michael Donahue:
    a. Thomas Edward Donohue 100
    b. Thomas Reilly Donahue Jr. 97.85
    c. Leo McTiernan 97.16
11. Donald Scott McGovern:
    a. none
12. Michael Francis Faughnan Jr.:
    a. Joseph Patrick Faughnan 99.02
13. Michael Patrick Clancey:
    a. none

B. 95% or greater probability of a common male-lineage ancestor at 900 years ago or less (25 years per generation), given or assuming no common male-line ancestor in the last ten generations, 37-marker test. Results additional to the comparisons at 650 years, if the probabilities were 99% (rounded) or greater at that interval; otherwise "added" here.

1. William John Donohoe Jr.:
    a. Leo McTiernan 97.79
2. Michael Joseph Donohoe:
    a. Brian Thomas Donohoe 99.76, added
    b. Elmer Charles ("Ed") Donohue 99.76, added
    c. Leonard Charles Donohoe 99.48
    d. Raymond Joseph Donohue 97.64
    e. John LiPomi O'Donoghue 98.34
3. Brian Thomas Donohoe:
    a. Michael Joseph Donohoe 99.76, added
    b. Leonard Charles Donohoe 99.48

    c. James Hugh Donohoe 99.45
    d. Elmer Charles ("Ed") Donohue 98.41
4. James Hugh Donohoe:
    a. Brian Thomas Donohoe 99.45
    b. Leonard Charles Donohoe 98.85
    c. Elmer Charles ("Ed") Donohue 99.46
    d. Raymond Joseph Donohue 95.55
    e. John LiPomi O'Donoghue 96.79
5. Leonard Charles Donohoe:
    a. Brian Thomas Donohoe 99.48
    b. Michael Joseph Donohoe 99.48
    c. James Hugh Donohoe 98.85
    d. Elmer Charles ("Ed") Donohue 96.84
6. Raymond Joseph Donohue:
    a. Michael Joseph Donohoe 97.64
    b. Elmer Charles ("Ed") Donohue 97.61
    c. James Hugh Donohoe 95.55
7. John LiPomi O'Donoghue:
    a. Michael Joseph Donohoe 98.34
    b. James Hugh Donohoe 96.79
8. Bernard Joseph ("Brian") Donohue:
    a. John (mn?) Donohoe 99.19
9. Thomas Reilly Donahue Jr.:
    a. Joseph Michael Donahue 99.87, added
    b. Thomas Edward Donohue 99.87, added
    c. Michael Francis Faughnan Jr. 98.24
10. Joseph Michael Donahue:
    a. Thomas Reilly Donahue Jr. 99,87, added
    b. Leo McTiernan 99.79, added
11. Donald Scott McGovern:
    a. none
12. Michael Francis Faughnan Jr.:
    a. Thomas Reilly Donahue Jr. 98.24
13. Michael Patrick Clancey:
    a. none

C. 95% or greater probability of a common male-lineage ancestor at 1250 years ago or less (25 years per generation), given or assuming no common male-line ancestor in the last 24 generations, 37-marker test. Results additional to the comparisons at 650 years and 900 years, if the probabilities were 99% (rounded) or greater at either interval; otherwise "added" here.

1. William John Donohoe Jr.:
    a. Leo McTiernan 99.69, added

    b. Thomas Reilly Donahue Jr. 97.68
    c. Michael Francis Faughnan Jr. 95.86
2. Michael Joseph Donohoe:
    a. Raymond Joseph Donohue 99.66, added
    b. John LiPomi O'Donoghue 99.79, added
    c. none otherwise
3. Brian Thomas Donohoe:
    a. Elmer Charles ("Ed") Donohue 99.80, added
    b. Raymond Joseph Donohue 98.70
    c. John LiPomi O'Donoghue 99.16
4. James Hugh Donohoe:
    a. Raymond Joseph Donohue 99.45, added
    b. John LiPomi O'Donoghue 99.65, added
    c. none otherwise
5. Leonard Charles Donohoe:
    a. Elmer Charles ("Ed") Donohue 99.51, added
    b. Raymond Joseph Donohue 97.02
    c. John LiPomi O'Donoghue 98.06
6. Raymond Joseph Donohue:
    a. Michael Joseph Donohoe 99.66, added
    b. Elmer Charles ("Ed") Donohue 99.66, added
    c. James Hugh Donohoe 99.45, added
    d. Brian Thomas Donohoe 98.70
    e. Leonard Charles Donohoe 97.02
    f. John LiPomi O'Donoghue 98.61
7. John LiPomi O’Donoghue:
    a. Michael Joseph Donohoe 99.79, added
    b. James Hugh Donohoe 99.65, added
    c. Brian Thomas Donohoe 99.16
    d. Leonard Charles Donohoe 98.06
    e. Raymond Joseph Donohue 98.61
8. Bernard Joseph (“Brian”) Donohue:
    a. Brendan O’Donoghue 97.00
9. Thomas Reilly Donahue Jr.:
    a. Michael Francis Faughnan Jr. 99.77, added
    b. Joseph Patrick Faughnan 97.81
    c. William John Donohoe Jr. 97.68
    d. Richard D. Donohoe 97.68
    e. Robert Paul Donohoe 97.68
    f. Donald Scott McGovern 98.64
    g. Clovis Gene McGovern 96.10
    h. Joseph A. Donohoe V 95.58
10. Joseph Michael Donahue:
    a. Clovis Gene McGovern 99.00
    b. Michael Francis Faughnan Jr. 98.37
    c. Joseph Patrick Faughnan 98.75

    d. Donald Scott McGovern 98.54
11. Donald Scott McGovern:
    a. Clovis Gene McGovern 98.02
    b. Thomas Reilly Donahue Jr. 98.64
    c. Michael Francis Faughnan Jr. 98.45
    d. Joseph Michael Donahue 98.54
    e. Thomas Edward Donohue 98.54
    f. Leo McTiernan 97.13
    g. Joseph Patrick Faughnan 96.10
12. Michael Francis Faughnan Jr.:
    a. Thomas Reilly Donahue Jr. 99.77, added
    b. Leo McTiernan 99.16
    c. Joseph Michael Donahue 98.37
    d. Thomas Edward Donohue 98.37
    e. Donald Scott McGovern 98.45
    f. Clovis Gene McGovern 97.79
    g. William John Donohoe Jr. 95.86
    h. Richard D. Donohoe 95.86
    i. Robert Paul Donohoe 95.86
    j. Joseph A. Donohoe V 95.86
13. Michael Patrick Clancey:
    a. John (mn?) Donohoe 97.75