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Height Characteristic of Pedestrian and Digital Identity

Thakkar AK*

Forensic Science Laboratory, Gujarat, India

***Corresponding author:** Thakkar AK, Retired Assistant Director Forensic Science Laboratory, Gujarat, India, Tel: 9979954667, E-mail: tashok35@gmail.com

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Abstract

Each and every adult subject is having specific digital data of height characteristic. Physically it is measured in units of centimeter or in feet. It can also relatively be measured using light beam (camera) having same geological plane of control and exhibit image. The data of height images are mathematically proportional and related to each other with reference to that particular distance. Mathematically height relation of imagesis P^1 X P^2 = 1.000 and distance relation is D^1 X D^2 =1.000. P^1 and P^2 is ratio data of height and D^1 and D^2 are ratio data of distance. Computerize image height data is having three digits after decimal point. Twelve digital height data is calculated. Probability of having same twelve digital height data of two different subjects is rare, as a result adult subject is having specific digital code of identity. The data obtained can be described as photographic height (length) of the subject or height identity data for that particular distance. Aim of the article is to pointing out or to identify a missing (bhagedu) and a wanted person (culprit) from the mob using available data of height and recorded data of the investigating authority. The presence of informer (khabari), to identify a culprit is not required and there be a more than one spots of search at a time.

Keywords: Photographic Unit of Length (rpp.x mm); Relative Relation of Image Height; Relative Relation of Distance; Sequence of Height; Relative Fixed-Distance Sequence of Height; Fusion of Height Situation and Fusion of Distance Situation

Introduction and digital code of the height\length characteristic

Height characteristic of an adult person is constant mathematical figure [1,2]. Forensic science is having routine practice to have photograph of crime scene with the image of foot-rule, and the principle of photogrammetry is used to calculate distance between any two objects or the length of an article if required in future [3-6]. The height/length data of the subject or object can be referred as photographic height with reference to that particular distance. Author is introducing method to calculate relative photographic height characteristic of the subject from the distance. The missing offender or a culprit, is a person having bails during the process of justice, and do not attained the court at the date of summons. Fixed distance is a distance at witch foot rule is having image height 25.0 mm. It can be calculated using available data of height and recorded data. The mathematical relation equations of image height is P^1 X P^2 = 1.000 and relation equation of distance from camera is D^1 X D^2= 1.000. P^1 & P^2 are ratio data of relative image height and D^1 & D^2 are ratio data of relative distance on the plain ground [7].

Photographic unit of length

Photographical relation between height of subject, height of images and distance from camera is mathematically explained as below.

(1)The data of image height is proportional with the measured height data of subject with reference to that particular distance. hp (image) α Hs (subject) ------ (distance is constant) (Bigger is the image height, bigger will be the measured height.)

(2) The data of image height is inversely proportional with the distance. Hp (image) α 1\d ---------- (subject or object is constant) (Bigger is the image height, smaller will be the distance)

Measured height data, Image height data and distance data are having proportional relation and the graph of any one of above data Vs other data is always straight line graph. Author describes control foot-rule of 300.000 mm as a flexible control as it can be enlarged or squeezed mathematically and the relation can be converted into equation. For example the foot-rule of 300.000 mm is having image height 23.324 mm. The proportionate equation for this particular distance is as under.

300.000:: 23.324=12.8622877722:: 1.00000000000. Means 12.8622877722 millimeter length unit is squeeze to 1.000 mm. The photographic unit of length can be refereed as relative-proportional-photographic unit (rpp.x mm). If the distance is reduces the conversion data becomes smaller and smaller. Theoretically if unit data of length and photographic unit data of length is having same numerical data than, 1.000 millimeter is equivalent to 1.000 rpp.x millimeter (value of x is 1.000) and 300.000 mm = 300.000 rpp.x mm.

Position situation of the ground and Available sequence

Position situation from the camera can be described as below.
(1) If distance between subject & foot rule from camera is same, that is both are snapped with same distance. The situation can be named as fusion of distance situation.
(2) If image height of subject and image height of control foot rule is having same data means subject and control foot rule is snapped with different distance having same unit of height. The situation can be named as fusion of height situation.

Both the situation is having same geological direction plane of photography. The mathematically height data can be described as (A, B, C), where A is height of control foot rule, B is image height data of control and C is image height data of exhibit. The sequence is named as available sequence of height.

The sequence (300.000, 23.324, 120.932) is describe as under.
1. Height of control (foot-rule) ----------Hs (foot-rule) = 300.0 mm
2. Image height of control - ---------- hp (con) = 23.324 rpp.x mm
3. Image height of exhibit ---------- hp (exh) = 120.932 rpp.x mm
4. Ratio of images: - Control::Exhibit = 23.324:: 120.932 =1.000:: 5.18487394957 --- (1) and

Exhibit::Control = 120.932:: 23.324 = 1.000:: 0.19286871961 ---(2)

Exhibit image height is 5.18487394957 times bigger than height of control image. It is relative mathematical relation of the exhibit image….. MR (exh) = 5.18487394957.

Control image height is 0.19286871961 time smaller than height of exhibit image. It is relative mathematical relation of the control image….. MR (con) = 0.19286871961.

If images are to increase up to the height of control foot-rule (300.000 mm), the control image is to increase relatively at the rate of 5.18487394957 mm per unit of distance, is the relative photographical relation of control image PR (con) = 5.18487394957 and exhibit image is to increase relatively at the rate of 0.19286871961 mm per unit of distance. It is relative photographical relation of exhibit imagePR (exh) = 0.19286871961

Fixed distance sequence or fixed distance photography: It is a sequence at which the control foot-rule is having 25.000 mm image.It can mathematically be calculated from available sequence.

Available sequence is (300.000, 23.324, 120.932) PR (con) = 5.18487394957 and PR (exh) = 0.19286871961 (25.000 -23.324 =1.676), (1.676 X 5.18487394957 = 8.68984873947), (8.68984873947+120.932 =129.621848739) Fix distance sequence is (300.000, 25.000, 129.621848739)

Mathematical relation between height ratio and distance ratio:

The ratio of height will be as under.

Control::Exhibit = 25.000 ÷ 129.621848739 = 0.19286871961 --------- (P^1)
Exhibit:: control =129.621848739 ÷ 25.000 = 5.18487394956 --------- (P^2)
P^1 X P^2 = 0.19286871961 X 5.18487394956 = 0.99999999999

Both subject and foot rule are snapped from same distance and at the same time.
Distance of control foot-rule from camera is d1 and distance of subject from camera is d2.

$d^1 \div d^2 = D^1$ and $d^2 \div d^1 = D^2$
D^1 X D^2 = 1.00000000000
P^1 X P^2 = D^1X D^2 = 1.00000000000

It is also proved with different distance of control and exhibit images the multiplication of ratio value is always 1.0000

Images are increased as per their PR to have same units of height:-

Fixed distance sequence is (300.000, 25.000, 129.621848739), PR (con) =5.18487394956, PR (exh) = 0.19286871961 and A is the distance of unit to be increased.

Mathematical equation for the same is as under.

Control = Exhibit

Height of control image + PR (con) X A = height of exhibit image + PR (exh) X A

25.000 + 5.18487394956 A = 129.621848739 + 0.19286871961 A

(5.18487394956 – 0.19286871961) A = 129.621848739 – 25.000

4.99200522995 A = 104. 621848739

A = 20.9578804347

25.000 + (5.18487394956X 20.9578804347) =129.621848739+ (0.19286871961X20.9578804347)

25.0000 + 108.663968304 = 129.621848739 + 4.04211956518

133.663968304 = 133.663968304

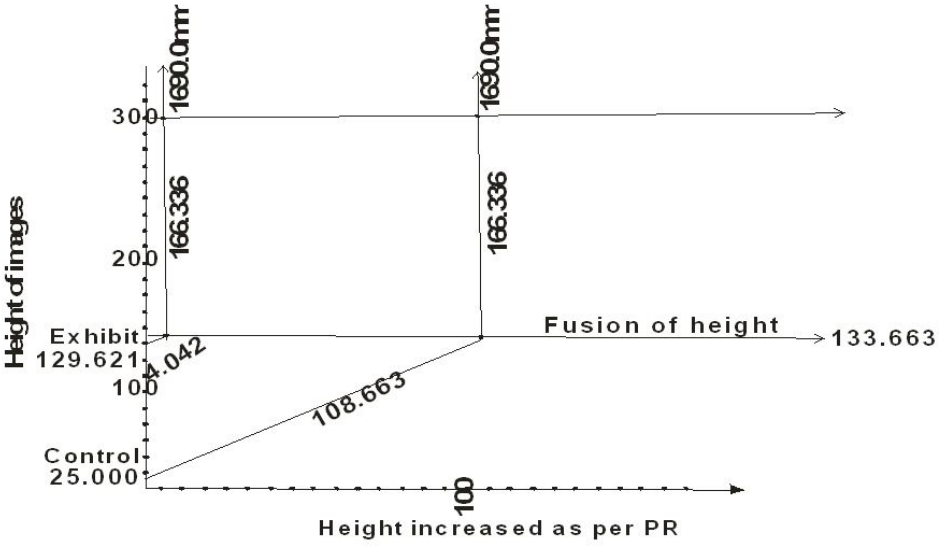
Mathematically fusion of height situation is (20.9578804347, 133.663968304), that is both images is to increased 20.9578804347 units of distance and will obtained 133.663968304 units of height.

The units to be increase up to the height data of control foot-rule is 166.336031696.

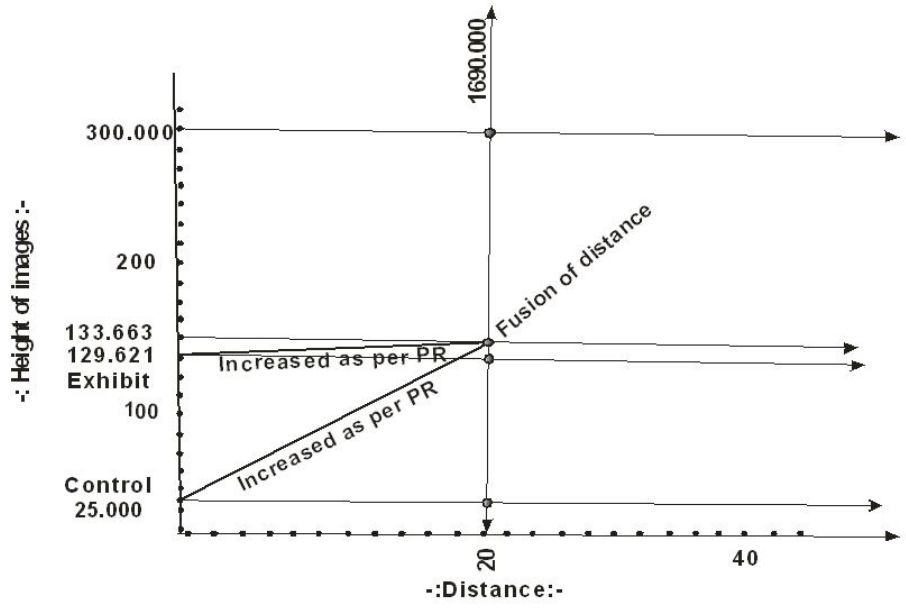
(300.000 - 133.663968304=166.336031696)

The above mathematical data can further be explained by plotting the graphs as below.

(1) Increasing height Vs image height



(2) Distance Vs increasing height



a. Measured height of the subject is = 1690.000mm (169.000 cm.)
b. Fixed distance sequence is (300.000, 25.000, 129.621)
c. PR (con) = 5.18487394957 and PR (exh) = 0.19286871961
d. Images are increased 166.336031696 units to obtained height data of control foot-rule.
166.336031696 + 133.663968304 = 300.000)

Height of subject:

Height of subject can mathematically be calculated from above data.
Height of subject = (PR (con) X length of foot rule) + (Data of fusion height)
= (5.18487394956 X 300.000) + (133.663968304)
= (1555.46218486) +133.663968304
= 1689.12615316 rpp.x mm
= 168.912615316 rpp.x cm

Data 168.912615316 cm is related with the distance 25.000 mm of control image height.

Relation equations of height:

The height characteristic data can be used to identify or to pointing out a wanted or a culprit person from the distance.

(A) The person is having two images obtained from different distance and at different time:

Data are as under.

(1) Measured height of subject = Hs (subject) = 1500.0 mm
(2) Image height hs (record) = 235.0 mm (The data is obtained from the record of investigating authority)
(3) Image height hs (field) = 177.0 mm (The data is obtained from the field)
(4) Ratio of measured height and images

1500.0:: 235.0 = Factor of the height = F (record) = 6.38297872340
1500.0:: 177.0 = Factor of the field --- = f (field) --= 8.47457627118
Ratio of factors:- f (field) :: F (record) & F (record) :: f (field)
8.47457627118:: 6.38297872340 = 1.32768361581:: 1.00000000000
6.38297872340:: 8.47457627118 = 0.75319148936:: 1.00000000000

Ratio of image heights and relation:

a. 235.0:: 177.0 = 1.32768361581:: 1.00000000000 ------- ratio (record)
b. 177.0:: 235.0 = 0.75319148936:: 1.00000000000 -------ratio(field) 235.000>177.000
c. hs (record) X ratio(field) = hs (field) & hs (field) X ratio(record) = hs (record)
235.0 X 0.75319148936 = 177.0 & 177.0 X 1.32768361581 = 235.0

Ratio value equations:

8.47457627118:: 6.38297872340 = 1.32768361581:: 1.00000000000 …… 1
235.0:: 177.0 = 1.32768361581:: 1.00000000000 ….. 2
6.38297872340:: 8.47457627118 = 0.75319148936:: 1.00000000000 …… 3
177.0:: 235.0 =0.75319148936:: 1.00000000000 ……. 4

Equation 1, 2 and 3, 4 are having same value, as a result both height and both distance from camera are relatively proportional with height of subject.

Equations for the above data are as under.

a. hs(record) X F (record) = 235.0 X 6.38297872340 = Hs (subject) = 1499.99999999
b. hs (field) X f (field) =177.0 X 8.47457627118 ---- = Hs (subject)= 1499.99999999
c. hs(record) X ratio (field) X f (field):-
235.0 X 0.75319148936 x 8.47457627118 --------- = Hs (subject) = 1499.99999999
d. hs(field) X Ratio (record) X F (record):-
177.0 X 1.32768361581 X 6.38297872340 -------- = Hs (subject) = 1499.99999999
235.0 X 0.75319148936 X 8.47457627118 = 177.0 X 1.32768361581 X 6.38297872340
1499.99999999(record) = 1499.99999999(field)

Subject of record and subject of the field are having same twelve digital height/length characteristic

(B) The images of different persons:

(1)Measured height of subjectin the record is Hs (subject)=1500.0 mm
(2) Image height = hs (record) = 235.0 mm (The data obtained from the record)
(3) Image height = hs (field) = 242.0 mm (The data is obtained from the field)
(4) Ratio of measured height and images:

1500.0 ÷ 235.0 = Height factor = F (record) = 6.38297872340
1500.0 ÷ 242.0 = Height factor = f (field) = 6.19834710743
Ratio of factors:
6.38297872340:: 6.19834710743=1.02978723404:: 1.00000000000
6.19834710743:: 6.38297872340=0.97107438016:: 1.00000000000

(5) Ratio of image heights:

a. 235.0:: 242.0 = 0.97107438016:: 1.00000000000= Ratio(record-235)
b. 242.0::235.0 = 1.02978723404:: 1.00000000000= Ratio(Field-242) Exhibit > Control
hs (record) X ratio(field) = hs (field) & hs (field) X ratio(record) = hs (record)
235.0 X 1.02978723404 = 241.999999999 and 242.0 X 0.97107438016= 234.999999998

Equations for the above data are as under.

a. hs(record) X F (record) = 235.0 X 6.38297872340 = Hs(subject) =1499.99999999
b. hs (field) X f (field) = 242.0 X6.19834710743 ---- = Hs (subject)= 1499.99999999
c. hs(record) X Ratio (record) X f (field):
235.0 x 0.97107438016 X 6.19834710743 = Hs (subject) = …….. 1414.47817770
d. hs(field) X Ratio (field) X F(record)
242.0 X 1.02978723404 X 6.38297872340 = Hs (subject) = …… 1590.69262108
hs(record) X Ratio record X f (field) = hs(field) X Ratio field X F (record)
235.0 X 0.97107438016 X 6.19834710743 = 242.0 X 1.02978723404 X 6.38297872340
1414.47617770 = 1590.69262108

Subject of record and subject of the field do not have same twelve digital height characteristics.

The image comparison equation

hs(record) X Ratio (field) X f (field) = hs(field) X Ratio (record) X F (record)

Height characteristic of pedestrian:

Hs(ped) can be obtained by finding the proportionate ratio of distance with reference to proportionate height ratio. The helper of the investigator is asked to walk nearby to the pedestrian with caring a foot-rule of 300.000 mm or its size to size picture photograph on the back side of his dress or any other length measured photograph of any article and height/length of pedestrian is calculated.

Reproducibility

Height calculated is not the actual height of subject but it is a length between two parallel head point line and toe point line of the subject with reference to that particular selected distance (It is 25.000 mm). It is to be considered that, there is no difference of length with the different postures of the subject as standing, walking or sleeping. It can be described as a forensic digital number of the subject to point out or to identify the subject (culprit) from the distance. The informer to identify a subject from the mob is not required. The due allowance is to be given for hat and foot wear. Fixed distance photographic length of the fifty subjects is calculated thrice and the result is as under.

Subject no 1. (Mr.Him)

Manually measure height of subject is 1690.000 mm (169.000 cm)

(a) Available sequence is (300.000, 23.324, 120.932)
Fix distance sequence is (300.000, 25.000, 129.621848739)
PR (con) = 5.18487394957, PR (exh) = 0.19286871961
Fusion of height = (20.9578804347, 133.663968304).
Height calculated =1689.12615316 rpp.x mm

(b) Available sequence is (300.000, 28.538, 143.940)
Fix distance sequence = (300.000, 25.000, 126.095031187)
PR (con) = 5.04380124745 PR (exh) = 0.1982631652
Fusion of height = (20.8635304213, 130.231500765)
Height calculated = 1643.37187499

a. 1689.12615316
b. 1643.37187499
c. 1696.87775784
Mean = 1676.45859533rpp.x mm
=167.645859533 rpp.x cm

(c) Available sequence is (300.000, 43.832, 228.346)
PR (con) = 5.20957291476, PR (exh) = 0.19195431494
Fixed distance sequence = (300.000, 25.000, 130.239322870)
Fusion of height = (20.9734394632, 134.245883406)
Height calculated = 1696.87775784 rpp.x mm

Subject no. 2 (Mr.Ash)

Manually measure height of subject is 1620.0 mm (162.0 cm)

(a) Available sequence is (300.000, 13.169, 65.908)
Fix distance sequence is (300.000, 25.000, 125.129100850)
PR (con) = 5.00516403402, PR (exh) = 0.19974813376
Fusion of height = (20.8367190121, 129.291196586).
Height calculated = 1630.84040678 rpp.x mm

a. 1630.84040678
b. 1592.51999638
c. 1556.74170613
Mean =1593.36736975 rpp.x mm
= 159.336736975 rpp.x cm

(b) Available sequence is (300.000, 58.321, 276.102)
PR (con) = 4.73417806336, PR (exh) = 0.21122990778
Fix distance sequence is (300.000, 25.000, 165.696233385)
Fusion of height = (31.107105693, 172.266577386).
Height calculated =1592.51999638 rpp.x mm

(C) Available sequence is (300.000, 40.991, 195.800)
PR (con) = 4.77665829084, PR (exh) = 0.20935137895
Fix distance sequence is (300.000, 25.000, 119.416457272)
Fusion of height = (20.6722383876, 123.744218884)
Height calculated = 1556.74170613 rpp.x mm

Subject no 3 (Mrs.Pin)

Manually measure height of subject is 1580.0 mm (158.0.cm)

(A) Available sequence is (300.000, 16.601, 80.517)
PR (con) = 4.85012951027, PR (exh) = 0.20618006135
Fix distance sequence is (300.000, 25.000, 121.253237756)
Fusion of height = (20.7265903332,125.526647422)
Height calculated = 1580.5655005 rpp.x mm

a. 1580.5655005
b. 1596.72998284
c. 1549.05558761
Mean=1575.45035698 rpp.x mm
=157.545035698 rpp.x cm

(B) Available sequence is (300.000, 26.634, 130.506)
PR (con) = 4.8999774724, PR (exh) = 0.20408257091
Fix distance sequence is (300.000,25.000,121.253237756)
Fusion of height = (20.7265903332,125.526647422)
Height calculated =1596.72998284 rpp.x mm

(C) Available sequence is (300.000, 28.257 134.305)
PR (con) = 4.75298156209, PR (exh) = 0.21039425188
Fix distance sequence is (300.000, 25.000, 118.824539053)
Fusion of height = (20.654427234, 123.170111818)
Height calculated = 1549.05558761 rpp.x mm

Subject no. 4 (Mrs.Aru)

Manually measure height of subject is 1540.000 mm (154.000 cm)

(A) Available sequence is (300.000, 35.297, 162.072)
PR (con) = 4.59166501402, PR (exh) = 0.21783968598
Fix distance sequence is (300.000, 25.000, 114.791625351)
Fusion of height = (20.5293121276, 119.263724258)
Height calculated = 1496.79322845 rpp.x mm

a. 1496.79322845
b. 1496.87169193
c. 1495.92100017
Mean = 1496.52864018 rpp.x mm
=149.652864018 rpp.x cm

(B) Available sequence is (300.000, 20.358, 93.484)
PR (con) = 4.59200314372, PR (exh) = 0.21776988575
Fix distance sequence is (300.000, 25.000, 114.80007893)
Fusion of height = (20.5293302012, 119.270748822)
Height calculated = 1496.87169193 rpp.x mm

(C) Available sequence (300.000, 42.583, 195.483)
PR (con) = 4.59063476035, PR (exh) = 0.21783479893
Fixed distance sequence = (300.000, 25.000, 114.282869009)
Fusion of height = (20.417780323, 118.73057208)
Height calculated = 1495.92100017 rpp.xmm

Subject no 5 (Mrs. Vib)

Measured height of subject is 1490.00 mm (149.0cm)

A. Available sequence = (300.000, 23.898, 132.698)
Fixed distance sequence = (300.000, 25.000, 136.345056144)
hp(con) = 5.55268223282, hp(exh) = 0.18009314383
Fusion of height = (20.2509438555, 136.345056144)
Height of subject = 1665.80466984 rpp.x mm

a. 1665.80466984
b. 1806.75136636
c. 1808.58496224
Mean:- 1760.38033281 rpp.x mm
= 176.038033281 rpp.x cm

B. Available sequence = (300.000, 31.103, 173.435)
hp (con) = 5.57615021059, hp (exh) = 0.17933519762
Fixed distance sequence = (300.000, 25.000, 130.403755265)
Fusion of height and distance = (19.5307334069, 133.906303199)
Height of subject = 1806.75136636 rpp.x mm

(C). Available sequence = (300.000, 19.184, 106.529)
hp (con) = 5.55301292743, hp (exh) = 0.18008241887
Fixed distance sequence = (300.000, 25.000, 138.825223185)
Fusion of height = (21.1849423705,142.640258108)
Height of subject = 1808.58496224 rpp.x mm

Length of subject (Vib) is calculated using different related distance from camera in unit of image height.

Calculated length Related distance from camera in unit of rpp.x

(1) 176.038033281 rpp.x cm 25.000 mm
(2) 173.759301004 rpp.x cm 40.000 mm
(3) 172.285776464 rpp.x cm 10.000 mm

Subject no. 6 (Mr.Mni)

Measured height of subject is 1720.00 mm (172.0 cm)
Available sequence is (300.000, 30.629, 145.837)
PR (con) = 4.76140259231, PR (exh) = 0.21002214801
Fixed distance sequence = (300.000, 25.000, 119.035064808)
Fusion of height = (21.0526315199, 137.28069944)
Height of the subject = 1737.28067096 rpp.x mm

1737.28067096rpp.x mm
= 173.728067096rpp.x cm

Subjectno.7 (Mrs. Rek)

Measured height of subject 1520.00 mm (150.0 cm)
Available sequence = (300.000, 30.462, 121.846) 1304.97672758 rpp.x mm
PR (con) = 3.99993434442, PR (exh) = 0.25000410354 = 130.497672758 rpp.x cm
Fusion of height = (19.9999343436, 104.998424267)
Height of subject = 1304.97672758 rpp.x mm

Subject no. 8 (Mrs. Kem)

Measured height of subject 1480.000 mm (148.0 cm)
Available sequence = (300.000, 32.367, 175.532)1398.93700512 rpp.x mm
Fixed distance sequence = (300.000, 25.000, 107.247) = 139.893700512 rpp.x cm
PR (con) = 4.28988000000, PR (exh) = 0.23310675356
Fusion of height = (20.2739948731, 111.973005126)
Height of subject = 1398.93700512 rpp.x mm

Subject no 9 (Mr. Kem)

Measured height of subject is 1800.00 mm (180.0 cm) 1882.28727058 rpp.x mm

Available sequence = (300.000, 30.367, 175.532) = 188.228727058 rpp.x cm
PR (con) = 5.78035367339, PR (exh) = 0.1729997949
Fusion of height = (21.3120468985, 148.191168577)
Height of subject = 1882.28727058 rpp.x mm

Subject no.10 (Mr. Ume)

Measured height of subject is 1600.00 mm (160.0 cm)
Available sequence = (300.000, 52.832, 263.742) 1626.66329150 rpp.x mm
Fixed distance Sequence = (300.000, 25.000, 124.802203211) = 162.666329150 rpp.x cm
PR (con) = 4.9920881284, PR (exh)= 0.20031697643
Fusion of height= (20.8278317235, 129.036852982)
(Table 1) Height of subject = 1626.66329150 rpp.x mm

S.No		Maximum	Minimum	Difference
1	(Mr. Him)	1696.8778	1643.3719	53.505883
2	(Mr. Ash)	1630.8404	1556.7417	74.098701
3	(Mrs. Pin)	1596.73	1549.0559	47.674125
4	(Mrs. Aru)	1496.8717	1495.921	0.9506918
5	(Mrs. Vib)	1808.585	1665.8047	142.78029

Table 1: Calculated maximum and minimum length data in unit of rpp.x mm

Factors relating to the difference:
(1) Arrear in selection of image head point and toe point.
(2) Angle of photography (should be 0.00). (An angle between front side geometric planes of subject and Photographer)
(3) Angle between front side geometric plane of camera lens and ground level plane. (Should be parallel)
(4)The difference up to 150.0 rpp.x mm is to be neglected as 1.00 millimeter length is equivalent to 10.0 to 20.0 rpp.x mm depending on the distance between subject (foot-rule) (Table 2) and camera.

Comparison of measured height and calculated length:

S.No	Subject	Measured height in cm	calculated length in rpp.x cm	Difference
1	(Mr. Him)	169	167.64586	1.3541405
2	(Mr. Ash)	162	159.33674	2.663263
3	(Mrs. Pin)	158	157.54504	0.4549643
4	(Mrs. Aru)	154	149.6529	4.377136
5	(Mrs. Vib)	149	176.03803	27.038033
6	(Mr. Mni)	172	173.72807	1.7280671
7	(Mrs. rek)	152	130.49767	22.497673
8	(Mrs. Kem)	148	139.8937	8.1062995
9	(Mr. kem)	180	188.22873	8.2872706
10	(Mr. Ume)	160	162.66633	2.6663292

Table 2: Comparison of measured height and calculated length

Conclusion

Photographical length between head point and toe point of fifty subjects are calculated, it is only a mathematical process of addition and multiplication except measurement of subject's height. The twelve digital length data of the subject is constant data with respect to the distance. The data of standing, sleeping, and walking posture of the subject is to be considered same. It is a forensic identity code of the culprit. Precautionary measures and uses of the length data are as under.

Twelve digital height characteristic of the subject and pedestrian using light beam is relatively calculated. Resulted data are not the actual height of subject, but it is a length between head point and toe point for specific fixed distance. It is to be considered as forensic identity code number. The data can be used to pointing out the subject from the distance. The subject do not knows that he is being doubted by authority. Factors that influence the data are as under.

(1) Height of subject (2) Ratio of image height and distance (3) Selected fixed distance (4) Configuration of the camera lens. (NI-CON-D40X camera and even a smart mobile camera are used for the photographic images). (5)Camera is to be kept parallel with the plain ground) (6) Recommended to select image height between 100.0 to 200.0 rpp.x mm. (7) Ageing effect of the subject may change the data due to bending of the back bone, but within short period of time say about 1-2 year the data is constant.(8)Makeup or camouflage do note influence the identity.

The concept is based on photogrammetric principle, that measure the distance between two points of the ground having same geological plane. Scientific and forensic identification is carried out by preparing card having data of Digital code,Name, Blood-group, Body marks, Finger prints, Thumb impression, Male/Female, Date of birth,Habits, and Body behavior etc. The closed circuit camera describes the actions and is further investigated by authority.In the event of mass casualty destroyed or decomposed body can be identified by comparing the length data with recent photograph.

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